11482

G Brown Goode

579.06

NH

QL
63
S678
NH

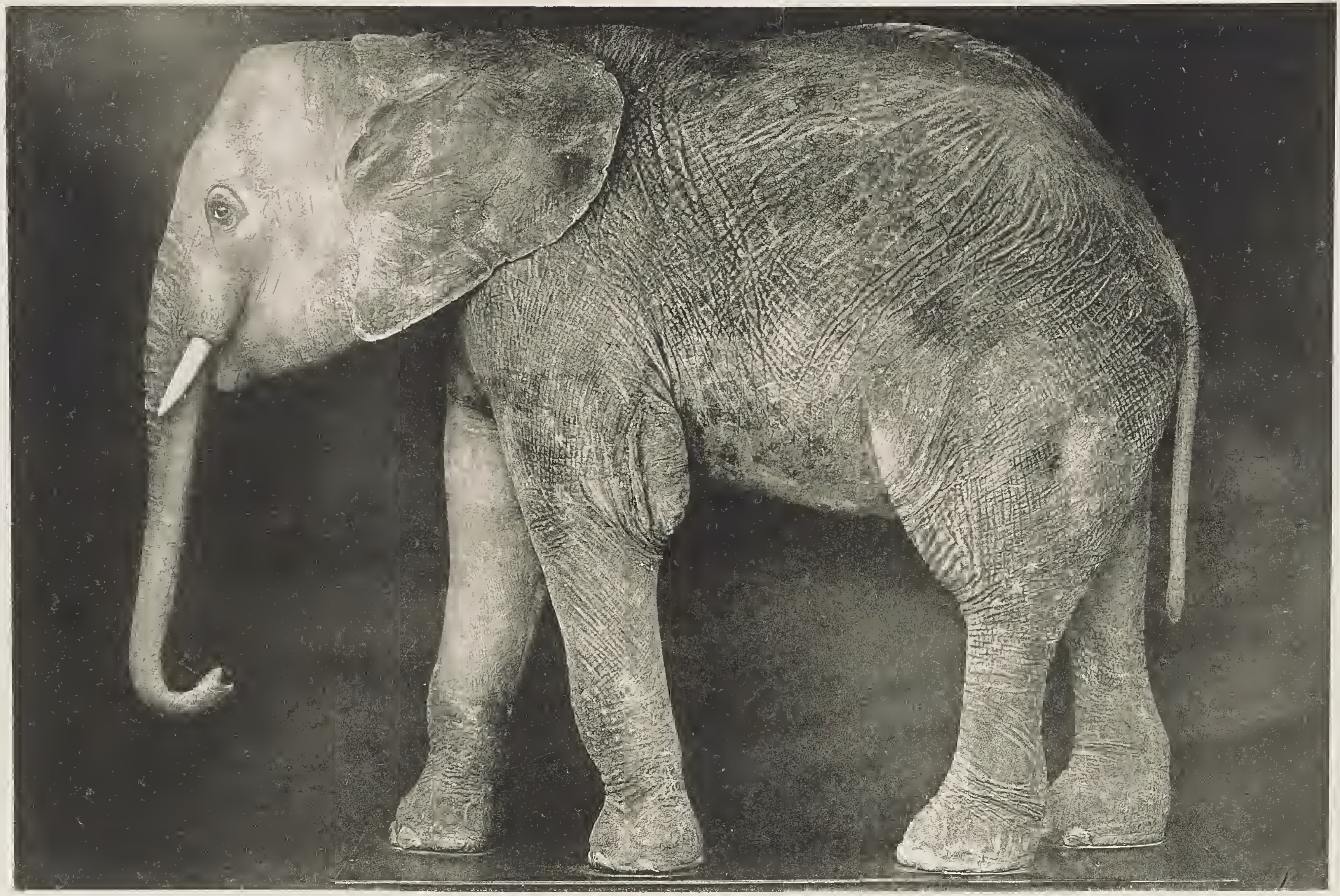
THIRD ANNUAL REPORT

OF THE

SOCIETY OF AMERICAN TAXIDERMISTS,

1882-'83.

HELIOTYPE PLATE PRESENTED BY PROF. J. W. P. JENKS.



AFRICAN ELEPHANT "MUNGO," MOUNTED BY WM. T. HORNADAY. AWARDED FIRST PRIZE AT NEW YORK EXHIBITION, 1883.

QL
63
S678
NH

THIRD ANNUAL REPORT

OF THE

SOCIETY

OF

AMERICAN TAXIDERMISTS.

Society of American Taxidermists.

MARCH 24TH, 1882, TO JULY 1, 1883.

Compiled by the Secretary.

WASHINGTON, D. C.
GIBSON BROTHERS, PRINTERS.
1884.

Entered according to Act of Congress, in the year 1883, by
Frederic A. Lucas,
In the office of the Librarian of Congress, at Washington, D. C.
All rights reserved.

SOCIETY

OF

AMERICAN TAXIDERMISTS,

Organized March 24th, 1880.

List of Officers for 1883–'4.

PRESIDENT.

WM. T. HORNADAY,	of Washington, D. C.

VICE-PRESIDENT.

GEO. H. HEDLEY,	of Medina, N. Y.

SECRETARY.

FREDERIC A. LUCAS,	of Washington, D. C.

TREASURER.

THOS. W. FRAINE,	of Rochester, N. Y.

EXECUTIVE COMMITTEE.

CLARENCE B. RIKER,	of New York City.
WILLIAM PALMER,	of Washington, D. C.
FRED. T. JENCKS,	of Providence, R. I.

And the above-named officers.

Members of the Society.

HONORARY MEMBERS.

Prof. J. A. Allen	Cambridge, Mass.
Prof. Spencer F. Baird	Washington, D. C.
Mr. Daniel C. Beard	New York City.
Mr. James C. Beard	New York City.
Mr. Andrew Carnegie	New York City.
Dr. Elliott Coues	Washington, D. C.
Prof. G. Brown Goode	Washington, D. C.
Mr. Thomas H. Hinckley	Milton, Mass.
Dr. J. B. Holder	New York City.
Prof. J. W. P. Jenks	Middleboro, Mass.
Dr. G. E. Manigault	Charleston, S. C.
Prof. Henry A. Ward	Rochester, N. Y.

CORRESPONDING MEMBERS.

Brady, Edward J	Sydney, New South Wales.
*DeKempeneer, C. E	Sydney, New South Wales.
Theobald, Albert G. R	Coimbatore, Madras Pres., India.

---

* Deceased.

CONTENTS.

PAGE.
Officers of the Society ... 1
Honorary and Corresponding Members ... 2
Active Members ... 3
Catalogue of the New York Exhibition ... 5
Judge's Report ... 28
Secretary's Report ... 31
Treasurer's Report ... 37
Address of Dr. J. B. Holder ... 39
The Scope and Needs of Taxidermy: *Address of President F. A. Lucas* ... 51
Taxidermy as a Decorative Art ... *Frederic S. Webster* ... 59
Common Faults in the Mounting of Quadrupeds ... *Wm. T. Hornaday* ... 67
The Value of Animal Illustrations to Taxidermists ... *F. W. Staebner* ... 72
The Mounting of Crustaceans ... *Frederic A. Lucas* ... 74
How to Clean Soiled Bird Skins ... *Frederic S. Webster* ... 77
How to Make a Good Bird Skin ... *Samuel F. Rathbun* ... 82
On the Mounting of Turtles ... *Frederic A. Lucas* ... 84
Struggles of an Amateur Taxidermist ... *Prof. J. W. P. Jenks* ... 90
Bibliography of Taxidermy ... *Lewis M. McCormick* ... 93
The Taxidermic Collection at the United States National Museum ... 112
List of Prizes to be Awarded at the Fourth Annual Exhibition ... 119
List of Points and Values for the Judgment of Specimens at Exhibitions ... 120
Index ... 121

APPENDIX.

Constitution of the Society ...

PLATES.

African Elephant Mungo ... Frontispiece.
Specimens in the Taxidermic Collection of the United States National Museum ... To face 118.

[illegible]

ACTIVE MEMBERS.

Akeley, Clarence E.	2 College Ave., Rochester, N. Y.
Aldrich, P. W.	409 Washington St., Boston, Mass.
Allen, Anson C.	26 West Main St., Rochester, N. Y.
Andrews, Samuel W.	35 West 42d St., New York City.
Bailly, Jules F. D.	Ward's Natural Science Establishment, Rochester, N. Y.
Barrows, Prof. Walter B.	Wesleyan University, Middletown, Conn.
Bell, John G.	335 Broadway, New York City.
Bellows, Otis G.	Bridgeton, N. J.
Benedict, James C	Smithsonian Institution, Washington, D. C.
Bicknell, Eugene P	Box 2958, New York City
Birney, Herman H.	1901 Harewood Ave., Washington, D. C.
Blood, Chas. L.	Taunton, Mass.
Bloodgood, Frederick C.	45 W. 14th St., New York City.
Bogert, Louis	Hackensack, N. J.
Bruner, Lawrence	Dep't of Agriculture, Washington, D. C.
Bryant, W. E	520 Sycamore St., Oakland, Cal.
Cameron, John E.	182 Sixth Ave., New York City.
Cameron, Miss M.	182 Sixth Ave., New York City.
Capen, Elwin A.	409 Washington St., Boston, Mass.
Chafee, G. A.	Middletown, Conn.
Chapin, Geo. D.	Syracuse, N. Y.
Copeland, J. C.	Court St., Rochester, N. Y.
Critchley, Wm. J.	Ward's Natural Science Establishment, Rochester, N. Y.
Davie, Oliver	Columbus, Ohio.
*Dugan, Mrs. Mary Jeffrey	New York City.
Dutcher, William	304 Second Ave., New York City.
Eddy, N. A.	Bay City, Mich.
Elgin, Rev. William	Indianapolis, Ind.
Emerton, J. H.	Yale College Museum, New Haven, Conn.
Forney, Andrew H.	National Museum, Washington, D. C.
Fraine, Thomas W.	12 Joslyn Park, Rochester, N. Y.
Gleason, Edward B.	Elmira, N. Y.
Graham, C. W.	St. Johnsbury, Vt.
Gray, Geo. M.	258 Westminster St., Providence, R. I.
Hazleton, Jr., Geo. C.	Boscobel, Wis.
Hedley, Geo. H.	Medina, N. Y.
Hedley, Mrs. Geo. H.	Medina, N. Y.
Hedley, Chas. H.	Medina, N. Y.
Hendley, John W.	National Museum, Washington, D. C.
Hornaday, William T.	National Museum, Washington, D. C.
Hough, Romeyn B.	Cornell University, Ithaca, N. Y.
Houghton, C. A.	West Medway, Mass.
Humphrey, Fred.	Lawrence, Mass.
Hutchison, Geo. F.	5 Meigs St., Rochester, N. Y.
Jencks, Fred. T.	258 Westminster St., Providence, R. I.
Jeremiah, Wm. H.	Newark, N. Y.
Johnson, Blanchard F.	501 Maple Ave., Washington, D. C.

---

* Deceased.

Johnson, Frank E........44 Beekman St., New York City.
Knowlton, F. H........Brandon, Vt.
Lawrence, Robert B........34 Wall St., New York City.
Little, Everett W........60 W. 40th St., New York City.
Lucas, Frederic A........National Museum, Washington, D. C.
Marshall, Henry........National Museum, Washington, D. C.
Martens, John........107 North Ave., Rochester, N. Y.
McCormick, Lewis M........National Museum, Washington, D. C.
McNeal, Percy M........1012 New York Ave., Washington, D. C.
Merrill, Harry........Bangor, Me.
Myhill, A........Medina, N. Y.
Nicholas, George L........Princeton College, Princeton, N. J.
Noe, Fletcher E........New York St., Indianapolis, Ind.
Northrop, Edwin F........33 Green St., Syracuse, N. Y.
Ormsbee, E. L........Cleveland, Ohio.
Palmer, Joseph........National Museum, Washington, D. C.
Palmer, William........National Museum, Washington, D. C.
Park Austin F........31 Museum Buildings, Troy, N. Y.
Rathbun, S. F........Auburn, N. Y.
Richardson, Jenness........U. S. National Museum, Washington, D. C.
Ridenour, Chas. E........Hagerstown, Md.
Riker, Clarence B........Box 1888, New York City.
Riggs, H. Clarence........20 Gibbs St., Rochester, N. Y.
Roberts, Dr. M. Josiah........105 Madison Ave., New York City.
Rowland, Thomas........Paterson, N. J.
Sage, John H........Portland, Conn.
Scott, Prof. W. E. D........Princeton College, Princeton, N. J.
Scudder, N. P........Smithsonian Institution, Washington, D. C.
Smith, Hugh M........1133 12th St. N.W., Washington, D. C.
Smith, Dr. Lloyd H........National Museum, Washington, D. C.
Smith, William G........206 Curtis St., Denver, Col.
Smith, Miss E........206 Curtis St., Denver, Col.
Spencer, F. W........Spencerport, N. Y.
Staebner, Prof. F. W........State Normal School, Westfield, Mass.
Sumner, Dr. Chas. R........14 S. Clinton St., Rochester, N. Y.
*Tennent, J. S........Somerville, S. C.
Tennent, J. T........401 7th St., Washington, D. C.
Townsend, C. H........Academy of Sciences, Philadelphia, Pa.
Vick, William........Vick Park, Rochester, N. Y.
Vick, Mrs. Wm........Vick Park, Rochester, N. Y.
Wallace, John........16 North William St., New York City.
Ward, Levi S........Gibbs St., Rochester, N. Y.
Webster, Frederic S........401 7th St., Washington, D. C.
Wells, Frederic........Battle Creek, Mich.
Wood, A. H........Painted Post, N. Y.
Wood, Nelson R........Ward's Natural Science Establishment, Rochester, N. Y.
Wright, Frank S........Auburn, N. Y.
Yeoman, A........200 William St., N. Y.

---

* Deceased.

THIRD
COMPETITIVE AND GENERAL EXHIBITION
OF THE
SOCIETY OF AMERICAN TAXIDERMISTS.

New York, April 30 *to May* 5, 1883.

BOARD OF PATRONS.

Dr. J. B. Holder, President.	Prof. A. S. Bickmore.
Prof. G. Brown Goode, Vice-President.	Dr. Wendell Prime.
Mr. J. C. Beard, Secretary.	Prof. Henry A. Ward.
Mr. Andrew Carnegie, Treasurer.	Mr. Robert Colgate.

JUDGES.

Mr. Jas. C. Beard, Artist.	Mr. Daniel C. Beard, Artist.
Prof. J. W. P. Jenks, Naturalist.	

All the honors to be awarded before disclosing any exhibitor's name to the Judges.

RULES AND REGULATIONS.

1. It is to be understood that Diplomas and Certificates are not to be awarded for single pieces or groups, except in the cases indicated by Art. 13, sec. 3, of the Constitution, and also those provided for in the list of Special Prizes. Regular Diplomas and Certificates are intended to show a degree of *average* excellence, and possess a high value.

In order to indicate clearly to both Members and Judges the exact basis upon which future awards are to be made, it has been decided that—

2. An "exhibit" cannot be entered for a Diploma or Certificate in its respective class unless it contains, either of single specimens or specimens arranged in groups, as follows:

a. If of Mammals, at least six small or three large specimens, or the equivalent composed of both small and large, counting one large specimen as being equal to two small ones. A Setter Dog shall be considered the minimum size for large Mammals.

b. If of Birds, at least fifteen small or five large specimens, or the equivalent composed of both large and small, the Red-tailed Hawk being considered the minimum size for large Birds.

c. If of Reptiles, at least eight small or four large specimens, one of eight pounds weight being considered the minimum for large Reptiles.

d. If of Fishes, the same as Reptiles.

e. If of heads, at least five, some of which shall be as large as the head of a Setter dog.

f. If of Mammal skins, at least twenty, and some of the skins must be as large as the skin of a common fox.

g. If of Bird skins, at least fifty, some of which must be as large as a Red-tailed hawk.

3. Each exhibitor who sends objects to be entered in competition must furnish the Secretary with a list of the same, and state distinctly what prize each exhibit is entered for, whether it be one of the Regular or Special Prizes, and which particular one. It is not expected that any one will enter an exhibit to compete as a "second best," for in every case an exhibit will receive the highest award it is found to deserve. At the time of the Judges' inspection all the objects in each exhibit which is in competition will be placed together and labelled as "Entered in Competition for ——————," whatever the case may be. Members must attend strictly to this regulation and in good season, in order to simplify the work of the Judges and insure proper attention to their work.

4. Each member who enters one or more competitive exhibits must furnish an affidavit declaring that all the specimens in said exhibit or exhibits were mounted by his own hands and without skilled assistance of any kind.

5. All freight and express charges to and from the place of exhibit will be met by the exhibitor; but the labor of unpacking, arranging in the hall and repacking will be performed by the Society without charge.*

6. Exhibits must be promptly on hand so as to be properly placed in the hall in time for inspection by the Judges. Objects received while the inspection is in progress will be excluded from competition.

7. Objects intended for sale shall in every case be priced in the catalogue, and any member of the Executive Committee may dispose of objects belonging to non-present members at the catalogue price by becoming personally responsible to the Treasurer for the payment of the purchase money. No object shall be delivered to a purchaser without a written order from the Treasurer, nor in any case until the close of the exhibition.

8. Whenever an object is sold at an exhibition, ten per cent. of the selling price shall be paid into the treasury of the Society.

By order of the Executive Committee.

---

* Suspended for exhibition of 1883.

THE PURPOSE OF THE SOCIETY.

As it is often asked what are the objects of the Society of American Taxidermists, it may not be amiss to briefly explain them. As the constitution states, "The objects of this Society are to promote intercourse between those who are interested in the art of taxidermy in various parts of America, to encourage and promote the development of that art, and to elevate it to a permanent and acknowledged position among the fine arts." Amateur and professional taxidermists are alike welcomed as members, and, upon entering, all stand upon an exact equality, their subsequent work alone determining their position in the Society. The organization was not started for the benefit of professionals alone; but, on the contrary, one of its chief aims is to encourage, stimulate, and *recognize* the efforts of amateurs, and many of the Society's most earnest supporters follow taxidermy merely for pleasure. One great desire of the members is to raise the standard of museum work, so that American museums may lead the world in the quality of their material and be filled with lifelike animals instead of being storehouses of monstrosities. It is gratifying to know that nearly all the work now done for our large museums is done by members of the Society. The annual meetings and exhibitions afford valuable opportunities for the comparison of work and methods, while it is specially intended that they shall create in the public a just appreciation of taxidermy as a fine art. The exhibitions are held in such localities as may be decided upon by the members. The first was in Rochester, N. Y., and the second in Boston, Mass.

In its effort to develop a new school of taxidermy in America which shall completely surpass its present standard of excellence, the Society expects the support of naturalists, artists, all lovers of animated nature, and especially the patrons and officials of American museums.

CATALOGUE

NOTICE.—The compilers of this Catalogue are not responsible for either the names of specimens or their prices.

All objects with prices affixed are for sale, and can be delivered at the close of the Exhibition.

Parties desiring to make purchases will please apply to any of the Society officers who may be present.

No object will be considered sold until at least ten per cent. of the price has been paid.

1.—A TAXIDERMIST'S SANCTUM.

THE PROPRIETOR AT WORK.

Figure by J. W. Hendley.

To most people the workroom of a taxidermist is in itself a curiosity shop. Until the preparateur is seen at work in his sanctum, surrounded by the paraphernalia of his art and specimens in process of treatment, the visitor can only wonder what the actual work is like. A taxidermist's shop is for work, and not for visitors, and only the chosen few are admitted to the presence of half-mounted birds and beasts. Since it is impossible to take all our visitors to our workrooms, we bring one of our workrooms to them. The presiding genius is "at home" to all comers, but he turns a deaf ear to all the questions which the average visitor would press upon him.

CLASS A.—TAXIDERMY PROPER.

Section 1.—Group of Mammals.

2.	Tartar hunter attacked by Tigers,	John Wallace,	$600.00
3.	Lions fighting over their prey,	John Wallace,	400.00
4.	Wild Cats in combat,	John Wallace,	15.00
5.	Group of Duck-billed Platypus. Exhibited by Ward's Natural Science Establishment,	F. S. Webster. With case,	325.00

Ornithorynchus paradoxus. 9 *Specimens*—4 *Male Adult*, 4 *Female*, 1 *Young.*

This group is composed of one of the most singular creatures belonging to the mammalian world. It is among the lowest of all mammals—possessing the external characteristics of a duck and a mole. It has soft double fur like an otter or beaver, spurs like a cock, webbed feet, a tail flat like a beaver, and is every way aquatic in its habits. The group represents the strange little creatures according to their various natural habits—swimming in the water, coming from and entering their burrows, rolled up in sleeping attitudes, climbing limbs, and playing. It also shows the vegetation of the locality in which they live as closely as possible, and is intended in every way to teach the life-history of the animal. A caving of the bank of earth has disclosed the interior of a burrow and its narrow passage. In this burrow are two animals (a mother and young); the mother is just waking up—disturbed by the catastrophe; the little creature is yet fast asleep in fancied security.

6.	Flying Squirrels at Home, (11 specimens,)	J. T. Tennent,	$23.00

This group represents these little animals gathering acorns and storing them away in their nests. These interesting Squirrels are seldom seen, as they are nocturnal in their habits.

7.	Flying Squirrels, (11 specimens,)	J. T. Tennent,	$23.00
8.	Opossum and young,	J. T. Tennent,	10.00
9.	Grey Rabbit and young,		7.25
10.	Group of Cat Squirrels,		10.00
11.	Fox Squirrels and young,		15.00
12.	Grey Squirrels, (cased),	Mr. & Mrs. G. H. Hedley,	10.00
13.	Nutcrackers—Grey Squirrels,	J. W. Palmer.	

Section 1 a.—Mixed Groups.

14.	Pointer Dog and Quail,	John Wallace.	
15.	Coming to the Point,	Wm. T. Hornaday,	$250.00

A white Setter Dog has come suddenly upon a flock of Quails concealed behind a thick bush in the open woods at the edge of a green meadow. The time represented is early morning in autumn. Although the dog cannot see the game, his keen scent tells him it is very near, and he has come to "a point" to indicate to his master the close proximity of the birds.

16.	"Does Your Mother Know You're Out?"	Wm. T. Hornaday,	$35.00

A Scarlet Ibis, stalking along the bank of a tropical river, comes suddenly upon a tiny alligator which has just emerged from its shell. Two other alligator eggs lie half buried in the sand ready to hatch.

17.	Snowy Owl and Weasel, (square case),	Mr. & Mrs. G. H. Hedley,	$25.00
18.	Diver and Fish,	J. T. Tennent,	4.00

Section 2.—Groups of Birds.

19.	Woodcock and young, (under glass shade),	Thos. W. Fraine,	$15.00
20.	Cabinet Group of American Game Birds, (in case), a pair each of Ruffed Grouse, Pinnated Grouse, Quail, Woodcock, and Snipe. (Diploma of Honor at Boston Exhibition, 1882).	T. W. Fraine,	60.00

21.	Kildeer Plover and young, (under oval shade),	T. W. Fraine,	$20.00
22.	Blue-winged Teal, (cased),	Mr. & Mrs. G. H. Hedley,	25.00
23.	Goshawks, (cased),	Mr. & Mrs. G. H. Hedley,	25.00
24.	Cardinal Grosbeaks, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
25.	Marsh Rails, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
26.	Scissor-tailed Flycatchers, (corner case),	Mr. & Mrs. G. H. Hedley,	15.00
27.	Snow Buntings, (corner case),	Mr. & Mrs. G. H. Hedley,	15.00
28.	California Quail, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
29.	Meadow Larks, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
30.	Red-tailed Hawk and young, with prey,	J. T. Tennent,	10.00
31.	Steller's Jay, (group in case),	Levi S. Ward and S. C. Riggs,	20.00
32.	Cedar Birds, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
33.	Wilson's Tern and young, (cased),	Mr. & Mrs. G. H. Hedley,	16.00
34.	Golden Plover, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
35.	Florida Gallinules, (cased),	Mr. & Mrs. G. H. Hedley,	12.00
36.	Humming Birds, (case for easel),	Mr. & Mrs. G. H. Hedley,	20.00
37.	Humming Birds, (case for easel),	Mr. & Mrs. G. H. Hedley,	20.00
38.	Humming Birds, (case for easel),	Mr. & Mrs. G. H. Hedley,	20.00
39.	Miscellaneous Group of Winter Birds,	Clarence B. Riker.	
40.	Miscellaneous Group of Tropical Birds, (under glass shade),	P. W. Aldrich,	300.00
41.	Miscellaneous Group of Birds, (under glass shade),	P. W. Aldrich,	30.00
42.	Miscellaneous Group of Birds, (under glass shade),	P. W. Aldrich,	30.00
43.	Miscellaneous Group of Birds, (under glass shade),	P. W. Aldrich,	30.00
44.	Virginia and Yellow Rail, (under shade),	P. W. Aldrich,	10.00
45.	Young Wild Geese,	P. W. Aldrich,	10.00
46.	English Pheasants,	John Wallace,	25.00
47.	Woodcock and young,	John Wallace,	25.00
48.	Pinnated Grouse,	John Wallace,	10.00
49.	Miscellaneous Birds, (in case),	J. Palmer.	
50.	Miscellaneous Birds, (in rustic wall case),	J. Palmer.	
51.	Miscellaneous Birds, (in rustic wall case),	J. Palmer.	
52.	Group of Birds, six, (in rustic corner case),	William Palmer,	10.00
53.	South-southerlies, (in case),	William Palmer,	10.00
54.	Warblers, six birds, (in case),	William Palmer,	9.00
55.	Two Screech Owls, in case),	S. F. Rathbun.	
56.	Cedar Birds, (in glass shade),	W. J. Critchley,	13.00
57.	Group of Small Birds, (on fancy table),	W. J. Critchley,	8.00
58.	Kildeer Plover and young, (in glass case),	W. J. Critchley,	12.00
60.	Our Winter Visitors—Snow Bunting, (in case),	F. S. Webster,	15.00
61.	An Interrupted Dinner,	F. A. Lucas.	

Certificate of Merit at Rochester Exhibition. For the Taxidermic Collection, U. S. National Museum.

A Red-tailed Hawk has just killed a partridge, and has scarcely begun his meal, when a Goshawk swoops down upon him with outstretched talons to seize the quarry. The Hawk has turned upon his back, shielding his prey with one wing, and with open beak and talons is ready to receive his assailant, who hovers in mid-air immediately above him.

62.	"Spring," (Blue-birds),	Frederic A. Lucas.
63.	"Summer," (Yellow-birds),	Frederic A. Lucas.
64.	"Autumn," (Goldfinches),	Frederic A. Lucas.

65. "Winter," (Sparrows), ... Frederic A. Lucas.
66. "Winter," (Snow Buntings), ... Frederic A. Lucas, . $30.00
67. Sandpiper and young, ... Frederic A. Lucas.
68. Game Fowls and young. By the late Mrs. Mary Jeffrey Dugan. Loaned by
Mr. William J. Magee.

Section 3.—Groups of Reptiles.

69. Group of Edible Terrapins, . . . F. A. Lucas.
Mounted for the Taxidermic Collection, U. S. National Museum.

1. Diamond Back Terrapin (Malacoclemys palustris, Gm.).
2. Yellow-bellied Terrapin (Pseudemys scabra, Linn).
3. Slider (Pseudemys rugosa, Shaw).
4. Snapping Turtle (Chelydra serpentina, Linn).

The specimens in a museum are usually like the definitions in a dictionary, and are merely explanatory of the names on the labels. It would seem that for educational purposes something more is desirable, and that to attract and interest the average visitor specimens should be so mounted as to illustrate so far as possible the habits of an animal, or exhibit its peculiarities of attitude. This group is intended as an attempt to show what may be done with animals, which like turtles do not readily lend themselves to the making of groups. Birds and mammals can be much more easily combined in artistic and instructive groups. If the objections are made that groups interfere with systematic classification and take too much space, it can be replied that from the necessities of the case no *exact* arrangement can be made, while the *general* relationships of animals can be presented as well by groups as by single specimens. As for room, let us if necessary have fewer specimens and better ones. The support of the public is imparatively needed for the proper maintenance of a museum and the material on exhibition should be of such nature as to attract it.

Section 4.—Groups of Fishes.

Section 5.—Single Mammals.

70. African Elephant, "Mungo," . . Wm. T. Hornaday.
Mounted for the U. S. National Museum.
71. Hairless Mexican Terrier, ... Wm. T. Hornaday.
Mounted for the U. S. National Museum.

This specimen, which is *not* a plaster cast, but the natural skin stuffed, was prepared to show the possibilities of taxidermy, and is perhaps as difficult a subject as can be found. The mounted specimen is accompanied by a plaster cast taken from the dead animal in order to compare the anatomy of the living subject with that of the stuffed specimen.

72. Cinnamon, Bear, ... Wm. T. Hornaday.
Mounted for the U. S. National Museum.
73. Baby Orange Utan, ... Wm. T. Hornaday.
Mounted for the U. S. National Museum.
74. Diana Monkey, ... Wm. T. Hornaday.
Mounted for the U. S. National Museum.
75. Lioness, ... John Wallace, . . $40.00
76–77. Albino Deer, male and female, . John Wallace, . each 50.00
78. Monkey, ... John Wallace.
79. Monkey, ... John Wallace.
80. Pug Dog, ... T. W. Fraine.
81. Pug Dog, ... J. Storck, . . . 12.00
82. South American Monkey (*Lagothrix Humboldti*), F. S. Webster. Mounted
at Ward's Natural Science Establishment for the U. S. National Museum.

83. Leopard,	P.W. Aldrich and E. A. Capen,	For Sale.
84. Fox Squirrel (4 specimens),	P. W. Aldrich	each $4.00
85. Weasel (*Putorius erminea*),	J. S. Tennent,	6.00
86. Flying Squirrel,	J. S. Tennent,	1.75
87. Grey Fox,	J. S. Tennent,	11.00
88. Grey Fox,	J. S. Tennent,	9.00
89. Bat,	J. S. Tennent,	1.00
90. Rat.	J. S. Tennent,	1.25
91. Mole,	J. S. Tennent,	1.75
92. Rocky Mountain Sheep, male, Exhibited by Ward's Natural Science Establishment.	John Martens,	100.00
93. Moose—male (*Alces malchis*), (Museum Specimen), Exhibited by Ward's Natural Science Establishment.	John Martens,	225.00
94. Moose—female, Exhibited by Ward's Natural Science Establishment.	Wm. J. Critchley.	
95. Moose—young, Exhibited by Ward's Natural Science Establishment.	Wm. J. Critchley.	
96. Wanderoo Monkey, (Museum Specimen), Exhibited by Ward's Natural Science Establishment.	Wm. J. Critchley.	
97. Crowned Lemur (*Indris mitratus*), (Museum Specimen), Exhibited by Ward's Natural Science Establishment.	Wm. J. Critchley.	
98. Java Deer, (Museum Specimen).	Wm. J. Critchley,	$9.00
99. Mink, (Museum Specimen).	Wm. J. Critchley,	8.00
100. Chipmunk, in rustic case,	Mrs. Wm. Vick,	3.00
101. Raccoon,	W. H. Jeremiah,	15.00
102. Grey Squirrel,	W. H. Jeremiah,	3.00
103. Weasel,	W. H. Jeremiah,	3.00

Section 6.—Single Birds.

104. Peacock,	T. W. Fraine.	$20.00
105. Peacock,	T. W. Fraine.	Loaned.
106. European Pheasant, on antique bronze stand,	T. W. Fraine,	15.00
107. Quail,	T. W. Fraine,	4.00
108. Quail,	T. W. Fraine,	4.00
109. Wood Duck,	T. W. Fraine,	7.00
110. Least Bittern, on plaque	T. W. Fraine,	7.00
111. Snowy Heron, ebony and gold mounting,	T. W. Fraine,	12.50
112. English Kingfisher, on plaque,	T. W. Fraine,	8.00
113. Toucan,	T. W. Fraine,	12.50
114. Great Horned Owl,	T. W. Fraine,	10.00
115. Arctic Owl,	T. W. Fraine,	15.00
116. Arctic Owl,	T. W. Fraine.	Loaned.
117. Great Horned Owl (4 specimens),	T. W. Fraine,	7.50
118. Arctic Owl,	T. W. Fraine,	12.00
119. Screech Owl,	T. W. Fraine,	4.50

120.	Mottled Owl,	T. W. Fraine,	$4.50
121.	Arctic Owl,	T. W. Fraine,	10.00
122.	English Pheasant,	T. W. Fraine,	10.00
123.	English Kingfisher, on plaque,	T. W. Fraine,	8.00
124.	Green Heron,	T. W. Fraine,	4.50
125.	Least Bittern, on plaque,	T. W. Fraine,	7.00
126.	Golden Eagle,	John Wallace,	25.00
127.	Bald Eagle,	John Wallace,	25.00
128.	Peacock,	John Wallace,	20.00
129.	Great Grey Owl (2 specimens),	John Wallace,	each 25.00
130.	Snowy Owl (10 specimens),	John Wallace,	each 10.00
131.	Great Horned Owl (10 specimens),	John Wallace,	each 8.00
132.	Barred Owl (5 specimens),	John Wallace,	each 4.00
133.	Screech Owl (12 specimens),	John Wallace,	each 2.50
134.	Roseate Spoonbill,	John Wallace,	15.00
134*a*.	Great White Heron,	John Wallace,	15.00
135.	Bald Eagle (in case),	A. Yeoman.	For sale.
136.	Snowy Owl,	A. Yeoman	“
137.	Snowy Owl,	A. Yeoman.	“
138.	Great Horned Owl,	A. Yeoman.	“
139.	Barred Owl,	A. Yeoman.	“
140.	Screech Owl (12 specimens),	A. Yeoman.	“
141.	Great Blue Heron,	Thomas Rowland,	15.00
142.	Great White Egret (3 specimens),	Thomas Rowland,	each 12.00
143.	Snowy Egret,	Thomas Rowland,	8.00
144.	Great Horned Owl,	Thomas Rowland.	
145.	Rough-legged Falcon,	Thomas Rowland,	8.00
146.	Barred Owl (2 specimens),	S. F. Rathbun.	
147.	Great Horned Owl,	S. F. Rathbun.	
148.	Pine Grouse,	Miss E. Smith,	6.00
149.	Sharp-tailed Grouse,	Miss E. Smith,	4.00
150.	Great Horned Owl,	P. W. Aldrich,	15.00
151.	Snowy Owl (2 specimens),	P. W. Aldrich,	each 20.00
152.	Short-eared Owl,	P. W. Aldrich,	8.00
153.	Mottled Owl—young,	P. W. Aldrich,	5.00
154.	California Mountain Quail (2 specimens),	P. W. Aldrich,	each 3.00
155.	Common Quail (2 specimens),	P. W. Aldrich,	each 2.50
156.	Sharp-tailed Grouse (2 specimens),	P. W. Aldrich,	each 4.00
157.	Pinnated Grouse (2 specimens)	P. W. Aldrich,	4.00
158.	Harlequin Duck (4 specimens),	P. W. Aldrich,	each 8.00
159.	Bald Eagle,	P. W. Aldrich,	For Sale.
160.	Purple Sandpiper (4 specimens),	P. W. Aldrich,	each 1.50
161.	Marsh Hawk and Mouse,	William Palmer,	3.50
162.	“'Tis too much. I can not.” Kingfisher and Yellow Perch,	William Palmer,	8.00
163.	White Pigeon,	William Palmer,	3.00
164.	Great Horned Owl (2 specimens),	Mr. and Mrs. G. H. Hedley,	each 6.00
165.	Short-eared Owl (2 specimens),	Mr. and Mrs. G. H. Hedley,	each 5.00
166.	Australian Parrakeet (4 specimens),	W. J. Critchley,	each 3.00
167.	Screech Owl,	W. J. Critchley,	3.00

168.	King Vulture, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	$25.00
169.	California Vulture, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley.	
170.	Great White Heron, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley.	
171.	Kiwi, Apteryx australis, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	25.00
172.	Apteryx Oweni, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	20.00
173.	Apteryx Mantelli, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	25.00
174.	Great Blue Heron, Exhibited by Ward's Natural Science Establishment.	F. S. Webster.	
175.	American Wigeon, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	14.00
176.	Eider Duck, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	7.00
177.	Blue and Yellow Macaw, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	12.00
178.	Laughing Gull, Exhibited by Ward's Natural Science Establishment.	F. S. Webster,	8.00
179.	American Flamingo, Exhibited by Ward's Natural Science Establishment.	F. S. Webster.	
180.	Least Auk, male and female, Exhibited by Ward's Natural Science Establishment.	F. S. Webster.	
181.	Sparrow Hawk,	F. S. Webster,	3.50
181*a*.	Hawk Owl,	F. S. Webster,	13.00
182.	Red-tailed Hawk,	J. S. Tennent,	5.00
183.	Screech Owl (2 specimens),	J. S. Tennent,	each 4.00
184.	Purple-capped Lory,	J. S. Tennent,	3.00
185.	Meadow Lark,	J. S. Tennent,	1.50
186.	Magpie,	J. S. Tennent,	2.50
187.	Crested Grebe,	J. S. Tennent,	1.25
188.	Canary,	J. S. Tennent,	1.00
189.	Great Blue Heron,	J. T. Tennent,	7.00
190.	Blue Jay,	J. T. Tennent,	2.00
191.	Crow (2 specimens),	J. T. Tennent,	each 2.50
192.	Owl and Snipe,	J. T. Tennent,	4.00
193.	Sparrow Hawk with Summer Red Bird,	J. T. Tennent,	4.00
194.	Sparrow Hawk and Wax Wing (4 specimens),	J. T. Tennent,	each 4.00
195.	Sparrow Hawk (3 specimens),	J. T. Tennent,	each 2.00
196.	Sparrow Hawk in flight with Prey (2 specimens),	J. T. Tennent,	each 3.50
197.	Turkey Buzzard,	J. T. Tennent,	4.00
198.	Meadow Lark,	J. T. Tennent,	1.75
199.	Screech Owl and Bulfinch,	J. T. Tennent,	3.00
200.	Butcher Bird and Titmouse,	J. T. Tennent,	2.25
201.	Carolina Wren,	J. T. Tennent,	1.00

202. Ibis,	J. T. Tennent,	$4.00
203. King Fisher (2 specimens),	J. T. Tennent,	each 2.00
204. Goat Sucker,	J. T. Tennent,	2.00
205. Winter Red Birds (5 specimens),	J. T. Tennent,	each 1.75
206. Partridges (4 specimens),	J. T. Tennent,	each 2.00
207. Blue Jays (3 specimens),	J. T. Tennent,	each 1.75
208. Carolina Rice Birds (4 specimens),	J. T. Tennent,	each 1.75
209. Turtle Doves (3 specimens),	J. T. Tennent,	each 2.00
210. Butcher Bird, in act of eating Wren,	J. T. Tennent,	2.25
211. Screech Owl (two specimens),	J. T. Tennent,	each 2.50
212. Wood Kate,	J. T. Tennent,	3.00
213. Sand Piper,	J. T. Tennent,	1.25
214. Green Heron,	J. T. Tennent,	3.00
215. Sparrow Hawk and Red Bird,	J. T. Tennent,	4.25
216. Screech Owl and Red Bird,	J. T. Tennent,	4.50
217. Great Horned Owl,	J. T. Tennent,	5.00
218. Barred Owl,	J. T. Tennent,	4.50
219. Barred Owl,	L. S. Ward and H. C. Riggs,	5.00
220. Sea Dove (in glass case),	Mrs. Wm. Vick,	6.50
221. Red-shouldered Hawk,	L. M. McCormick,	4.00
222. Great Horned Owl,	L. M. McCormick,	8.00
223. Red-bellied Woodpecker,	L. M. McCormick,	Loaned.
224. Old Wife,	L. M. McCormick,	3.00
225. Screech Owl (2 specimens),	L. M. McCormick,	each 2.50
226. Field Lark,	L. M. McCormick,	1.50
227. Red-winged Blackbird,	T. W. Fraine,	2.50
228. Great Northern Diver (2 specimens),	W. H. Jeremiah,	15.00
229. Great Horned Owl (4 specimens),	W. H. Jeremiah,	each 8.00
230. Long-eared Owl,	W. H. Jeremiah,	4.00
231. Herring Gull,	W. H. Jeremiah,	4.00

Section 7.—Single Reptiles and Batrachians.

Museum Specimens exhibited by Ward's Natural Science Establishment.

232. Giant Japanese Salamander, (*Sieboldia maxima*),	F. S. Webster,	$38.00

Owing to the great rarity of this animal, both stuffed specimen and skeleton were made from one animal—the skin being mounted over an artificial skeleton. This process is one of great difficulty and requires much delicacy of touch.

233. Brazilian Tortoise,	F. S. Webster,	$25.00
234. Gopher,	F. S. Webster,	10.00
235. Speckled Terrapin,	F. S. Webster,	5.00
236. Speckled Terrapin,	F. S. Webster,	4.50
237. Sculptured Terrapin,	F. S. Webster,	6.00
238. Leather Turtle, (*Amyda mutica*),	F. S. Webster,	15.00
239. Leather Turtle, (*Aspidonectes spinifer*),	F. S. Webster,	15.00
240. Broad Terrapin, (*Podocnemis expansa*),	F. S. Webster,	22.00
241. Dumeril's Terrapin, (*Podocnemis dumeriliana*),	F. S. Webster,	22.00
242. Snapping Turtle,	W. J. Critchley,	10.00
243. Painted Terrapin,	W. J. Critchley,	4.00

244.	Speckled Terrapin,	W. J. Critchley,	$4.00
245.	Hawk's-bill Turtle,	W. J. Critchley,	15.00
246.	Alligator, young, (3 specimens),	J. T. Tennent,	each 2.00
247.	Rat Snake,	J. T. Tennent.	1.75

Section 8.—Single Fishes.

248.	Gar Pike, (*Lepidoteus osseus*), Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	$10.00
249.	Striped Sea Bass, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	9.00
250.	Grass Bass, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	4.00
251.	Speckled trout, 6¼ pounds in weight; from Nepigon River, on gold panel,	T. W. Fraine,	20.00
251*a*.	Black Bass, on panel,	F. S. Webster,	10.00

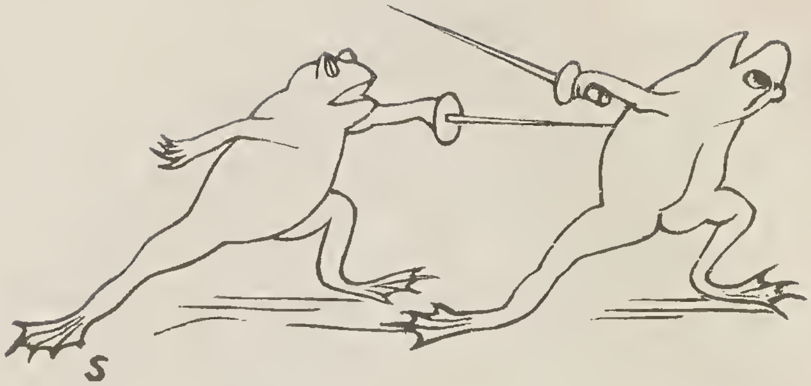
Section 9.—Heads.

252.	Buffalo, (2 specimens),	John Wallacc,	each 40.00
253.	Virginia Deer,	John Wellace,	25.00
254.	Musx Ox, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	125.00
255.	Royal Bengal Tiger, Loaned by Messrs. Ivison, Blakeman, Taylor & Co.	F. S. Webster.	
256.	"The Lady Jane." Pointer Dog,	F. S. Webster,	30.00
257.	Cariboo, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	75.00
258.	Virginia Deer,	E. A. Capen,	20.00
259.	Virginia Deer. Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	30.00
260.	Black tail Deer, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	28.00
261.	Lynx, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	10.00
262.	Prong-horned Antelope,	W. J. Critchley,	15.00
263.	Virginia Deer,	W. J. Critchley,	15.00
264.	Prairie Wolf, Coyote,	F. A. Lucas.	
265.	Monkey, "I should smile," Certificate of Merit at Exhibition of 1880.	F. A. Lucas.	
266.	Virginia Deer, Exhibited by Ward's Natural Science Establishment.	W. J. Critchley,	25.00
267.	White-tailed Gnu, Mounted for the U. S. National Museum.	Wm. T. Hornaday.	
268.	Virginia Deer,	Wm. T. Hornaday,	25.00
269.	Virginia Deer, Loaned by Major McBlair.	Wm. T. Hornaday.	
270.	Prong-horned Antelope, Loaned by Ward's Natural Science Establishment.	Wm. T. Hornaday,	20.00
271.	English Setter Dog,	Wm. T. Hornaday,	20.00
272.	Moose. Exhibited by Ward's Natural Establishment,		80.00

273.	Elk. Exhibited by Ward's Natural Science Establishment,	60.00
274.	Elk, in velvet. Exhibited by Ward's Natural Science Establishment,	45.00
275.	Mountain sheep. Exhibited by Ward's Natural Science Establishment,	55.00

Section 10.—Skins.

276.	Fifty Bird Skins,	Wm. G. Smith.
278.	Seventy-five Bird Skins,	S. F. Rathbun.
279.	Ten Bird Skins,	George F. Hutchinson.



CLASS B.—NOVELTIES IN TAXIDERMY.

Section 1.—Grotesque Groups and Animals Grotesquely Mounted.

280.	The Reform Club, (group of 9 Toads),	J. F. D. Bailly,	$18.00
281.	King Lear, (2 Frogs and 2 Toads),	J. F. D. Bailly,	8.00
282.	A Happy Family, (3 Frogs),	J. F. D. Bailly,	8.00
283.	The Dean of Grotesque Groups, (Frog and Toad),	J. F. D. Bailly,	6.00
284.	Hymeneal, (Frogs),	J. F. D. Bailly,	6.00
285.	After Election, (2 Toads),	J. F. D. Bailly,	6.00
286.	A Summer Day's Comfort, (Frog in hammock),	J. F. D. Bailly,	6.00
287.	The Escaped Convicts, (Frog and Toad),	J. F. D. Bailly,	5.00
288.	The Intimate Friends, (2 Toads),	J. F. D. Bailly,	4.50
289.	Boon Companions, (2 Toads),	J. F. D. Bailly,	4.50
290.	Before the Party, (2 Frogs),	J. F. D. Bailly,	4.50
291.	After the Party, (2 Toads),	J. F. D. Bailly,	4.50
292.	The Duellists. Loaned by F. Andrews.	J. F. D. Bailly,	
293.	An Affair of Honor, (2 Toads),	J. F. D. Bailly,	4.50
294.	The Can Can, (2 Frogs),	J. F. D. Bailly,	4.00
295.	The Barber, (2 Frogs,)	J. F. D. Bailly,	4.50
296.	The "Longshoreman," (Frog),	J. F. D. Bailly,	3.00
297.	Taking it Easy, (Frog)	J. F. D. Bailly,	3.00
298.	A Knight of St. Crispin, (Frog),	J. F. D. Bailly,	3.00
299.	The Drum Major, (Frog),	J. F. D. Bailly,	2.50
300.	The Smoker, (Frog),	J. F. D. Bailly,	3.00
301.	A Good Cigar, (Frog),	J. F. D. Bailly,	2.00
302.	Arabi Bey, (Frog),	J. F. D. Bailly,	2.50
303.	The First Smoke, (Frog in Rocking Chair),	J. F. D. Bailly,	2.50
304.	Enjoying His Pipe, (Frog),	J. F. D. Bailly,	3.00
305.	The Velocipede, (Frog),	J. F. D. Bailly,	4.00
306.	Crossing the Brook, (2 Frogs),	J. F. D. Bailly,	3.00
307.	The Pedagogue, (Frog),	J. F. D. Bailly,	3.00

308. A Deep Thinker, (Toad),	J. F. D. Bailly,	$2.50
309. The Bootblack. Loaned by F. Andrews,	J. F. D. Bailly,	
310. Shine 'em up? (Toad),	J. F. D. Bailly,	2.00
311. My Darling, (Toad),	J. F. D. Bailly,	2.00
312. Charlie Backus, (Toad),	J. F. D. Bailly,	3.00
313. "Walking Down Broadway,"	J. F. D. Bailly,	2.50
314. "We won't go Home 'till Morning," (Toad),	J. F. D. Bailly,	2.00
315. Skating, (Toad),	J. F. D. Bailly,	2.00
316. Skating, (Toad),	J. F. D. Bailly,	2.00
317. The Warrior's Return, (Toad),	J. F. D. Bailly,	2.00
318. Sold Again, (2 Frogs),	J. F. D. Bailly,	6.00
319. The Lovers, (Kittens),	J. F. D. Bailly,	6.00
320. Paganini, (Dressed Bird),	J. F. D. Bailly,	6.00
321. Domino! (2 Squirrels),	J. F. D. Bailly,	6.00
322. Euchered! (2 Squirrels),	J. F. D. Bailly,	6.00
323. Going to the Exhibition, (2 Squirrels),	J. F. D. Bailly,	6.00
324. The Father of a Family, (2 Frogs),	J. F. D. Bailly,	4.00
325. A Sunny Day, (Frog),	J. F. D. Bailly,	2.50
326. The Lone Fisherman. Loaned by F. Andrews.		
327. "The Clearin'," (Squirrels in case),	C. W. Graham.	
328. A New England Home Sixty Years Ago, log cabin, well sweep, etc.	C. W. Graham.	
329. Cinderella Going to the Ball, (in case), Fairy Coach drawn by white rats, with frog driver and footman; Godmother in the foreground.	C. W. Graham.	
330. "Who's that knocking?" (in case), A woodpecker tapping on a hollow tree disturbs the occupant.	C. W. Graham.	
331. Don Quixote, (statuesque, in case),	C. W. Graham.	
332. Taking his Grist to Mill, (in case), Kitten and Squirrels. A kitten harnessed to a cart filled with corn, has been driven up to an old windmill, where the driver and miller are unloading.	C. W. Graham.	
333. A matched Pair, (in case) Pair of kittens harnessed to a stylish cutter. Occupants, Squirrel and his lady.	C. W. Graham.	
334. The Fair Equestrian, (in case), Miss Chipmunk in full riding costume, taking a morning canter on a Mink.	C. W. Graham.	
335. The Old, Old Story, (Squirrels in case),	C. W. Graham.	
336. Backwoods Romeo, (Squirrels in case), The Balcony Scene.	C. W. Graham.	
337. "Git Out!" (Frog and Alligator), An explorer of the Florida Everglades too cordially welcomed by an old settler.	C. W. Graham.	
338. Voices of the Night, (Frogs),	C. W. Graham.	
339. Scene from Pinafore, (Squirrels), Ralph Rackstraw consigned to the dungeon.	C. W. Graham.	
340. Squirrels,	Mr. & Mrs. G. H. Hedley,	3.00
341. "Gawge, will you owlways love me?" (Owls),	T. W. Fraine,	10.00
342. Owl Alone with the Orphan, (Owls),	T. W. Fraine,	10.00
343. "Where have you been Owl Summer?" (Owls),	T. W. Fraine,	15.00
344. "Ask the Owld Man," (Owls),	T. W. Fraine,	10.00
345. The Orphan,	T. W. Fraine,	10.00

346.	The Owld, Owld Story (Owls),	T. W. Fraine,	$10.00
347.	"Where Have You Been Owl Night?" (Owls),	T. W. Fraine,	25.00
348.	"Will you Love me when I'm Owld?" (Owls),	T. W. Fraine,	10.00
349. 350.	Harmony and Discord (in two parts),	Wm. J. Critchley,	20.00

These two groups go to show that there are mischievous, practical jokers in the cat family as well as in our own. Upon a bench, on the sunny side of a house, lie three kittens. Underneath the bench lies Tabby, with eyes half shut, dreaming of mice, but little dreaming of the horrid spider which is slowly descending at the end of a string managed by a mischievous black kitten at an upper window. The spider descending suddenly at Tabby's nose causes her to elevate her back so suddenly and so high that one end of the bench is lifted up bodily, and the kittens are tumbled into a pail of water which is standing at the other end.

351.	"Take a Drink" (Monkey),	W. J. Critchley,	$5.00
352. 353.	The Tale of a Cat (Cat and Turtle),	Frederic A. Lucas.	

Part I.—The beginning; why doesn't Pussy come over the fence?
Part II.—The end; why Pussy didn't come.

Section 2.—Articles of Use and Ornament.

354.	Resplendent Trogon, (Stationary Screen), Exhibited by Ward's Nat. Science Establishment.	F. S. Webster,	70.00
355.	Humming Bird Screen with Honeysuckle Embroidery,	F. S. Webster,	55.00
356.	Embroidered Satin Screen with bird medallion,	F. S. Webster,	40.00
357.	Embroidered Plush Screen with bird medallion,	F. S. Webster,	30.00
358.	Embroidered Satin Screen with bird medallion,	F. S. Webster,	40.00
359.	Resplendent Trogon Medallion, Gothic frame,	F. S. Webster,	50.00
360.	Snowy Owl Fire Screen, Loaned by Mrs. J. C. Copeland.	F. S. Webster.	
361.	Great Horned Owl Screen, ebony pedestal, gold standard,	F. S. Webster,	20.00
362.	Combination Screen, gold standard. Argus Pheasant and Peacock,	F. S. Webster,	50.00
363.	Pea Fowl Screen, gold standard,	F. S. Webster,	30.00
364.	Pea Fowl Screen, gold standard,	F. S. Webster,	30.00
365.	Arctic Hare Medallion,	F. S. Webster,	40.00

This is the first mammal medallion ever made.

366.	Scarlet Ibis Medallion,	F. S. Webster,	45.00
367.	Snowy Heron Medallion,	F. S. Webster,	40.00
368.	Snowy Heron Medallion,	F. S. Webster,	40.00
369.	Snowy Heron Medallion,	F. S. Webster,	50.00

Diploma of Honor at Boston Exhibition for handsomest article of ornament or use.

370.	Wood Duck Medallion,	F. S. Webster,	20.00
371.	Wood Duck Medallion, Loaned by Mr. John Siddons, Rochester, New York.	F. S. Webster.	
372.	California Quail Medallion,	F. S. Webster,	15.00

373. Tiger Skin Rug,	F. S. Webster.	
Loaned by T. E. Smith, Esq., New York.		
374. Leopard Rug,	F. S. Webster,	$50.00
375. White Pelican Rug,	F. S. Webster,	20.00
376. Painted Satin Panel with Humming bird,	F. S. Webster,	10.00
377. Red-head Duck, plush panel,	F. S. Webster,	7.00
378. Harlequin Duck, plush panel,	F. S. Webster,	9.00
379. Goldeneye Duck, maple panel,	F. S. Webster,	8.50
380. Bird of Paradise, ornament,	F. S. Webster,	15.00
381. The Wounded Heron,	F. S. Webster,	17.00
382. Great Horned Owl, book standard,	F. S. Webster,	11.00
383. Acadian Owl, crescent standard,	F. S. Webster,	7.50
384. Mottled Owl, crescent standard,	F. S. Webster,	6.00
385. Long-eared Owl, grotesque crescent,	F. S. Webster,	9.50
386. Barred Owl, crescent standard,	F. S. Webster,	7.00
387. Short-eared Owl, gold crescent,	F. S. Webster,	7.00
388. Screech Owl, gold crescent,	F. S. Webster,	6.00
389. Screech Owl, gold crescent,	F. S. Webster,	6.00
390. Screech Owl and Young, ebony crescent,	F. S. Webster,	7.50
391. Screech Owl, plush panel,	F. S. Webster,	8.50
392. Owl Placque, "The Two Orphans,"	F. S. Webster,	5.00
393. Acadian Owl,	F. S. Webster,	7.50
394. Screech Owl,	F. S. Webster.	Loaned.
395. Young Screech Owl, ebony standard,	F. S. Webster,	3.00
396. Australian Parrakeet, gold ring standard,	F. S. Webster,	7.50
397. European Pheasant, plush standard,	F. S. Webster,	20.00
398. Young Chick, shell standard,	F. S. Webster,	3.50
399. Guinea Fowl, pen wiper,	F. S. Webster,	2.25
400. Gallinule, pen wiper,	F. S. Webster,	3.25
401. Chicken pen wiper, (4 specimens),	F. S. Webster,	each 2.50
402. Peacock Screen, ebony standard,	T. W. Fraine,	25.00
403. Peacock Screen, gold standard,	T. W. Fraine,	28.00
404. Peacock Screen, gold standard,	T. W. Fraine,	30.00
405. Peocock Screen, gold standard,	T. W. Fraine.	
Mounted for the Taxidermic Collection,	U. S. National Museum.	
406. Peacock Screen, gold standard,	T. W. Fraine,	35.00
407. Gull Screen, ebony and gold mounting,	T. W. Fraine,	12.00
408. Arctic Owl Screen, ebony and gold mounting,	T. W. Fraine,	25.00
409. Arctic Owl Screen, ebony and gold mounting,	T. W. Fraine,	25.00
410. European Pheasant Medallion,	T. W. Fraine,	25.00
411. European Pheasant Medallion,	T. W. Fraine,	16.50
412. Canvas-back Duck, ebony panel,	T. W. Fraine,	7.00
413. Scaup Duck, oak panel,	T. W. Fraine,	5.50
414. Canvas-back Duck, oak panel,	T. W. Fraine,	6.50
415. Shoveller Medallion,	T. W. Fraine,	12.00
416. Woodcock Medallion,	T. W. Fraine,	6.00
417. Long-tailed Duck, on panel,	T. W. Fraine,	7.00
418. Shoveller Duck, panel,	T. W. Fraine,	7.00

419.	Shoveller Duck,	T. W. Fraine,	$8.00
420.	Scaup Duck, oak panel,	T. W. Fraine,	5.00
421.	Buffle-head Duck, ebony and gold panel,	T. W. Fraine,	5.00
422.	European Pheasant, maple and gold panel,	T. W. Fraine,	11.00
423.	European Pheasant, maple and gold panel,	T. W. Fraine,	11.00
424.	California Quail Medallion,	T. W. Fraine,	7.50
425.	California Quail Medallion,	T. W. Fraine,	7.50
426.	Cock of the Rock, medallion on plaque,	T. W. Fraine,	15.00
427.	Cock of the Rock, medallion on plaque,	T. W. Fraine,	15.00
428.	English Pheasant, oak panel,	T. W. Fraine,	10.00
429.	English Hare, on panel,	T. W. Fraine,	12.00
430.	English Hare, on panel,	T. W. Fraine,	12.00
431.	Acadian Owl, gold standard,	T. W. Fraine,	7.00
432.	Red Owl, gold standard, (2 specimens),	T. W. Fraine,	each 6.00
433.	Acadian Owl, gold standard, (2 specimens),	T. W. Fraine,	each 7.00
434.	European Eared Owl, gold standard,	T. W. Fraine,	7.00
435.	European Barn Owl, gold standard, (2 specimens),	T. W. Fraine,	each 8.00
436.	Acadian Owl, gold standard,	T. W. Fraine,	7.00
437.	Acadian Owl, on crescent,	Mr. & Mrs. G. H. Hedley,	5.00
438.	Western Great Horned Owl, (2 specimens),	Mr. & Mrs. G. H. Hedley,	ea. 10.00
439.	Great Horned Owl,	Mr. & Mrs. G. H. Hedley,	10.00
440.	Screech Owl, (2 specimens),	Mr. & Mrs. G. H. Hedley,	ea. 5.00
441.	Mottled Owl, on crescent,	E. A. Capen,	10.00
442.	White Pigeon,	E. A. Capen,	3.00
443.	Harlequin Duck, on velvet panel,	E. A. Capen,	10.00
444.	Prairie Chicken, on panel,	E. A. Capen,	5.00
445.	Prairie Chicken, on panel,	E. A. Capen,	5.00
446.	Sharp-tailed Grouse, on panel,	E. A. Capen,	5.00
447.	Sharp-tailed Grouse, on panel,	E. A. Capen,	5.00
448.	California Quail, on panel,	E. A. Capen,	5.00
449.	California Quail, on panel,	E. A. Capen,	5.00
450.	Kittiwake Gull, on panel,	E. A. Capen,	10.00
451.	Redhead Duck, ash panel,	W. J. Critchley,	3.00
452.	Oldwife Duck, ash panel,	W. J. Critchley,	3.00
453.	Steller's Duck, velvet panel,	W. J. Critchley,	8.00
454.	Snowy Heron, Medallion	W. J. Critchley,	35.00
	Exhibited by Ward's Natural Science Establishment.		
455.	Snowy Heron Medallion,	W. J. Critchley,	35.00
	Exhibited by Ward's Natural Science Establishment.		
456.	Japanese Pheasant Medallion,	W. J. Critchley,	25.00
457.	Purple Grakle Medallion,	W. J. Critchley,	13.00
458.	Chicken, (5 specimens),	W. J. Critchley,	each 1.00
459.	Chicken, in fancy basket,	W. J. Critchley,	2.00
460.	Duckling, (2 specimens),	W. J. Critchley,	each 1.00
461.	Mallard Duck, ash panel,	L. S. Ward and H. C. Riggs.	
	Loaned by Mr. F. A. Ward.		
462.	Redhead Duck, on panel,	L. S. Ward and H. C. Riggs,	7.00
463.	Blue Egret Medallion,	F. A. Lucas,	25.00
464.	White Egret Medallion,	F. A. Lucas.	

465. Oriole Medallion,	F. A. Lucas,	$5.00
465*a*. Humming Bird Panel,	F. A. Lucas,	20.00
466. Dove's head, Medallion, on plaque,	Mrs. William Vick,	3.50
467. Dove's head, Medallion, on plaque,	Mrs. William Vick,	3.50
468. Dove, on plush panel,	Mrs. William Vick,	6.00
469. Dove, on plush panel,	Mrs. William Vick,	6.00
470. Dove, on plush panel,	Mrs. William Vick,	10.00
471. Parrakeet, on plush wall case,	Mrs. William Vick,	10.00
472. Lorikeet, on plush wall case,	Mrs. William Vick,	6.00
473. Screech Owl, on book, (3 specimens),	L. M. McCormick,	each 3.00
474. Red-cockaded Woodpecker head, on easel medallion,	L. M. McCormick,	1.50
475. European Red Partridge, Medallion,	J. Storck,	25.00
Exhibited by Ward's Natural Science Establishment.		
476. European Red Partridge, Medallion,	J. Storck,	25.00
Exhibited by Ward's Natural Science Establishment.		
477. Meadow Lark and Blue Jay Medallion,	J. Storck,	25.00
Exhibited by Ward's Natural Science Establishment.		
478. European Red Partridge Medallion,	J. Storck,	25.00
479. European Green-winged Teal Medallion,	J. Storck,	20.00
480. European Green-winged Teal Medallion,	J. Storck,	20.00
481. Woodcock Medallion,	J. Storck,	20.00
482. European Snipe and Sandpiper Medallion,	J. Storck,	20.00
483. California Quail and Oriole from Senegal. Medallion,	J. Storck,	20.00

The above medallions for dining rooms and other ornamental purposes are patented for the United States. May 20, 1882.

484. Wood Duck and Florida Rabbit, panel,	J. Storck,	20.00
485. Four Groups of Humming Birds, framed,	A. Yeoman,	each 5.00
486. Humming Bird, framed, (24 specimens),	A. Yeoman,	each 1.00
487. Snow Bunting on satin and gold panel,	C. W. Graham.	For sale.
488. Partridge Screen,	C. W. Graham.	"
489. Cigar Set. Nautilus Chariot, drawn by Chipmunk and driven by a Wren,	C. W. Graham.	For sale.
490. Grey Squirrel, card receiver,	C. W. Graham.	"
491. Crow, card receiver,	C. W. Graham.	"
492. Pigeon's head medallion, with easel,	C. W. Graham.	"
493. Goosander, on panel,	George F. Hutchison.	
494. Mallard, on panel,	George F. Hutchison.	
495. Wood Duck, on panel,	George F. Hutchison.	
496. Green-winged Teal, on panel,	George F. Hutchison.	
497. Shoveller Duck, on panel,	George F. Hutchison.	
498. Red-head Duck, on panel,	George F. Hutchison.	
499. Red-breasted Merganser, on panel,	George F. Hutchison.	
500. Screech Owl, on cresent, (2 specimens),	George F. Hutchison.	

CLASS B.—SECTION 3.

Articles Manufactured by Taxidermists.

501.	Horn Library Chair,	T. W. Fraine,	$45.00
502.	Horn Hat Rack,	T. W. Fraine,	35.00
503.	Pair of Polished Horns,	T. W. Fraine,	7.00
504.	Pair of Polished Horns,	T. W. Fraine,	5.00
505.	Horn and Bamboo Easel,	T. W. Fraine,	8.00
506.	Horn and Bamboo Easel,	T. W. Fraine,	7.50
507.	Horn and Bamboo Easel,	T. W. Fraine,	4.00
508.	Grebe Wall Pocket, (2 specimens),	T. W. Fraine,	each 4.00
509.	Sky Sweeper,	T. W. Fraine,	5.00
510.	Sky Sweeper,	T. W. Fraine,	4.00
511.	Sky Sweeper,	T. W. Fraine,	3.00
512.	Feather Banner for photograph,	C. W. Graham.	For sale.
513.	Hawk's claw photograph easel,	C. W. Graham.	“
514.	Peacock duster, with African Wild Cat tail for handle,	W. J. Critchley,	2.00
515.	Blue Egret lamp screen,	E. A. Capen,	8.00
516.	White Egret lamp screen,	E. A. Capen,	8.00
517.	Green Parrot Fan,	F. S. Webster,	1.50
518.	Roseate Spoonbill Fan,	F. S. Webster,	5.00
519.	Argus Pheasant Fan,	F. S. Webster,	3.00
521.	Snow Owl Fan, (2 specimens),	F. S. Webster,	each 2.00
522.	Swan's-down Fan, (3 specimens),	F. S. Webster,	each 3.00
523.	Flamingo Fan,	F. S. Webster,	2.50
524.	Emu Egg Ornament,	F. S. Webster,	7.00
525.	Fox-tail Duster, Buckhorn handle,	F. S. Webster,	3.50
526.	Peacock Duster, Wild Cat's paw handle,	F. S. Webster,	3.00
527.	Peacock Duster, Fox paw handle,	F. S. Webster,	2.00
528.	Peacock Duster, (3 specimens),	F. S. Webster,	each .75
529.	Sleepy Hollow Pillow, Black Swan,	F. S. Webster,	8.00
530.	Moose Antlers,	Ward's Natural Science Establishment.	35.00
531.	Pair Elk Antlers,	F. S. Webster,	50.00
532.	Pair Elk Antlers,	F. S. Webster,	40.00
533.	Pair Elk Antlers,	F. S. Webster,	40.00
534.	Pair Elk Antlers,	Ward's Natural Science Establishment.	35.00
535.	Pair Deer Antlers,	F. S. Webster,	8.00
536.	Cherry Hall Rack with Roman Ox Horns and brass mountings,	F. S. Webster,	90.00
537.	Black-tail Deer Hat Rack,	F. S. Webster,	15.00
538.	Virginia Deer Hat Rack,	F. S. Webster,	15.00
539.	Black-tail Antler Stool,	F. S. Webster,	15.00
540.	Black-tail Antler Stool,	F. S. Webster,	15.00
541.	Black-tail Antler Stool, plush top,	F. S. Webster,	15.00

542. Pair Candlesticks. Owl legs and shell,	F. S. Webster,	$10.00
543. Rustic panel,	Joseph Palmer.	
544. Rustic panel,	Joseph Palmer.	
545. Pair Horns mt. for Hat Rack,	T. W. Fraine,	5.00
546. Pair Horns mt. for Hat Rack,	T. W. Fraine,	6.00
547. Pair Polished Horns,	T. W. Fraine,	6.00
548. Pair Polished Horns,	T. W. Fraine,	6.00

CLASS C.—ADJUNCTS TO TAXIDERMY.

Section 1.—Taxidermists' Tools.

549. L. H. Schneider & Son, Washington, D. C.
550. George Tiemann & Co., 60 Chatham Street, New York.

Section 2.—Glass Eyes.

551. Demuth Brothers, 89 Walker Street, New York.
552. Christian Hahn, 16 North William Street, New York.

Section 3.—Artificial Leaves, Plants, and Flowers.

553. Artificial Leaves. C. Pelletier, 135 Wooster Street, New York.
554. Artificial Leaves. Maurice Gaupillot, 51 Bleecker Street, New York.

Section 4.—Rock Work.

555. A Yeoman, 200 William Street, New York.

Section 5.—Perches, Etc.

HONORARY EXHIBITS.

Original Animal Sculptures by Edward Kemeys.

556. "*The Still Hunt.*" American Panther crouching to spring. 5 feet 6 inches x 3 feet 6 inches. Colossal. Ordered in bronze for Central Park.

557. "*The Still Hunt.*" Working model of the above. 6x10 inches.

558. "*Baiting the Old Bull.*" Wounded Bison attacked by Wolves. 20x30 inches.

559. "*Playing Possum.*" American Wild Cat playing with an Opossum before killing it. 12x36 inches.

560. *The Bee Hunter.* American Black Bear. 7x11 inches.

561. *Fighting Panther and Deer.* 10x18 inches.

562. *Dead Panther and Deer.* American Panther and Deer, after having fought, lying locked in death. 10x18 inches.

563. "*Before and After the Feast.*" Companion pieces. American Grey Wolves. 6x14 inches.

564. *Disturbed at His Repast.* American Wild Cat with young Rabbit in his jaws. 6x12 inches.

565. "*Came a Wild Deer Stepping Lightly.*" The Mule Deer of Colorado. 7x18 inches. Loaned by Messrs. Tiffany & Co.

566. *"In the Throes of Death."* American Panther shot through the Lungs. 7x10 inches.

567. *Jaguar and Dead Peccary.* 10x32 inches.

568. *Virginia Deer.* 6x12 inches.

569. *English Fox Terrier and Rat.* 6x24 inches.

570. *Raccoon.* 6x8 inches.

571. *Trophies of the Chase.* Dead Bighorn, Wolf, and Lynx. 31x53.

572. *Still Life.* American Green-winged Teal. Panel, 8x14.

573. *Cheyenne Chief.* Terra cotta head. 7x10.

Exhibited by J. C. Beard.

574. Set of Original Drawings of Animals.

Exhibited by Prof. Henry A. Ward.

575. Fifteen Skins and Mounted Birds, from the collection of John J. Audubon.

In June of last year (see Ward's Natural Science Bulletin, Vol. 1, No. 3), Prof. Ward purchased from a grand-daughter of Audubon the entire remaining collection of Birds of this celebrated American ornithologist. This precious collection he reserves entire to take its place eventually in the museum of some scientific institution. These few duplicates he will dispose of to any gentleman who wishes to thus obtain a souvenir of the great naturalist.

576. Group of fifty Bird Skins.

577. Collection of Mammals, Birds, Reptiles, and Fishes—mounted museum specimens.

Exhibited by F. W. Staebner.

578. *The Temptation.* Orang Utans and Serpent. Pen and ink drawing.

579. *Falcon.* Oil painting.

580. *Head of Jaguar.* Oil painting.

Exhibited by Joseph Palmer.

CASTS IN PLASTER FROM DEAD ANIMALS.

581.	Head of Blackfish,	$10.00
582.	Head of Dolphin,	12.00
583.	Head of Porpoise,	1.00
584.	Head of Domestic Calf.	
585.	Head of Dog.	
586.	Porpoise,	15.00
587.	Alligator.	
588.	Striped Bass,	30.00
589.	Parrot Fish,	25.00
590.	Diamond Rattlesnake. Cast from nature by J. Palmer. Painted by A. Zeno Schindler.	
591.	Corn Snake. Cast from nature by William Palmer. Painted by A. Zeno Schindler.	

Exhibited by William Palmer.

CASTS IN PLASTER FROM DEAD ANIMALS.

592.	Head of Water Buffalo. Prepared for U. S. National Museum.	
593.	Head of Leather-back Turtle. Prepared for U. S. National Museum.	
594.	Yellow Perch, in frame,	$25.00
595.	Cat-fish, in frame,	18.00

Exhibited by J. F. D. Bailly.

596.	Skeleton of Humming Bird.	
597.	Skeleton of Bullfrog,	$5.00
598.	Skeleton of Snapping Turtle,	8.00

Exhibited by T. W. Fraine.

599. Pointer Dog and pair of Ruffed Grouse, in case. Loaned by H. H. Warner, Rochester, N. Y.

Exhibited by J. W. Hendley.

CASTS IN PLASTER FROM DEAD ANIMALS.

600. Spanish Mackerel.
601. Brook Trout.
602. Black Bass.

Exhibited by A. H. Forney.

603. Mexican Hairless Dog. Cast from dead animal, original of mounted specimen No. 71. Cast taken for anatomical reference in mounting.

Exhibited by the Society.

604. Photographs of members of the Society.
605. Photographs of pieces mounted by members of the Society.

NOTE.

The total number of entries in all classes for the first exhibition was 239; for the second, 231; but in this case there was a marked advance in the quality and variety of the work.

JUDGES' REPORT.

The Judges selected by the Society for their Third Annual Exhibition have the honor to announce the following awards:

REGULAR PRIZES.

I. Best Piece in entire Exhibition. Silver Specialty Medal.

To V. [Wm. T. Hornaday,] 70, African Elephant.

II. Second Best Piece in entire Exhibition. Second Specialty Medal, Bronze.

To M. [F. S. Webster,] 381, "Wounded Heron."

III. Best General Exhibit, General Average. Medal, Silver.

To M. [F. S. Webster.]

IV. Diplomas of Honor in Taxidermy Proper are awarded—

To N. [John Wallace,] 14, 75, 76, 77, 79, 121.
To G. [P. W. Aldrich,] 83, 83, 83, 83, 84.
To D. [Mr. and Mrs. G. H. Hedley,] for Birds.
To M. [F. S. Webster,] for Birds.
To J. [A. Yeoman,] for Birds.
To I. [T. W. Fraine,] for Birds.
To G. [P. W. Aldrich,] for Birds.
To P. [J. Storck,] for Birds.
To M. [F. S. Webster,] for Reptiles.
To W. [W. J. Critchley,] for Reptiles.
To W. [W. J. Critchley,] for Fishes.
To W. [W. J. Critchley,] for Heads.

Certificate of Merit.

To F. [Wm. Palmer,] for Birds.
To Z. [Mrs. Wm. Vick,] for Birds.
To O. [E. A. Capen,] for Birds, 450, H. C.
To X. [L. M. McCormick,] for Birds.

SPECIAL PRIZES.

Best Miscellaneous Exhibit. Bronze Medal.

To I. [T. W. Fraine.]

Best Exhibit of Reptiles. Bronze Medal.

To A. [Frederic A. Lucas.]

Best Exhibit of Fishes. Bronze Medal.

No award.

Best Exhibit of Heads. Silver Medal.

To N. [John Wallace.]

Best Display of Articles of Ornament or Use. Silver Medal.

To M. [F. S. Webster.]

Handsomest Article of Ornament or Use. Diploma of Honor.

To I. [T. W. Fraine,] 501, for Home Library Chair.

Second Handsomest Article of Ornament or Use. Certificate of Merit.

To W. [W. J. Critchley,] 454.

Best Exhibit of Grotesque Groups. Bronze Medal.

To H. [J. F. D. Bailly.]

Diplomas of Honor for Grotesque Groups.

To L. [C. W. Graham,] for 331.
To W. [W. J. Critchley,] for Cats.

Certificate of Merit for Grotesque Groups.

To L. [C. W. Graham,] 333, 334.

SPECIAL MEDALS RECOMMENDED.

To Edward Kemeys, for Original Animal Sculptures.
To Wm. T. Hornaday, for Setter Dog: "Coming to the Point."
To John Wallace, 2: "Tartar Hunter Attacked by Tigers," and "Great Horned Owl at Bay."
To Wm. Palmer, for Cast of Head of Leather-Backed Turtle.

VERY HIGHLY COMMENDED.

Mammals.

F. S. Webster, Nos. 5 and 82, "for evident accuracy and study."
John Wallace, No. 79. No. 3, special mention for composition and dramatic effect.
Wm. J. Critchley, Nos. 95, 96, 97.
Wm. T. Hornaday, Nos. 71, 72.

Birds.

F. S. Webster, 171, 179.
A. Yeoman, 135, 136, 139.
John Wallace. Display of Owls.
T. W. Fraine, 111, 112, 347.
P. W. Aldrich, 159, and Bald Eagle.
J. Storck, "exhibit commended for fine taste and general excellence."

Fishes.

W. J. Critchley, 250.

Heads.

F. S. Webster, 256.

Honorary Exhibits.

J. Palmer, Casts of Fishes, 588, 589.
Casts of Heads, 581, 582, 583, 584, 585.
J. W. Hendley, Casts of Fishes, 600, 601, 602.

HIGHLY COMMENDED.

Mammals.

J. Storck, 81.

Birds.

Mr. and Mrs. G. H. Hedley, 17, 35.
John Wallace, 127.
T. W. Fraine, 106, 113, 122.
Mrs. Wm. Vick, 471, 472.
P. W. Aldrich, 40.
W. H. Jeremiah, 182, 228.
Thomas Rowland, entire exhibit.
E. A. Capen, 450.

Remarks.

Mrs. Wm. Vick, 100. Deserving special notice.
P. W. Aldrich, 83. Very good indeed.
Clarence B. Riker. Birds. Limited display, but good positions.

JAS. C. BEARD,
J. W. P. JENKS,
DANIEL C. BEARD,
Judges.

The Judges appointed by the President for the purpose of making awards in Class A, Sec. 10, and in Class C, have the honor to report as follows:

To S. F. Rathbun, Auburn, N. Y., Diploma of Honor. Collection marked 100.
To Wm. G. Smith, Denver, Col., Diploma of Honor. Collection marked 90.
To Geo. C. Tiemann & Co., Diploma for Exhibit of Taxidermist's Tools.
To Demuth Brothers, Diploma for best Exhibit of Eyes.
To Christian Hahn, Certificate of Merit for Exhibit of Eyes.
To A. Yeoman, Diploma for Rock Work.
To W. H. Jeremiah, Certificate for Rock Work.

Respectfully submitted.

FRED. T. JENCKS,
FREDERIC S. WEBSTER,
WM. T. HORNADAY,
Judges.

SECRETARY'S GENERAL REPORT.

The third year of the Society of American Taxidermists has been one of rapid and substantial progress. Although at the beginning the future of the Society was involved in uncertainty on account of temporary financial embarrassment, the complete record for the year is all that the most ardent friend of the organization could reasonably desire.

In spite of the disheartening influence of the results of the Boston Exhibition, and the almost total lack of interest in the Society manifested by the people of that autocratic city; in spite of a widely-scattered membership and the consequent loss of strength; in spite of many difficulties and two postponements, the faith of the officers in the members and each other was fully met. The third Exhibition was held in New York, and was completely successful in every respect. In the face of such disadvantages we consider it a record of which we may well be proud.

In this connection, the Executive Committee desires to express to the members generally its thanks for the confidence reposed in it and the perfectly unanimous support which has sustained and encouraged the officers in their efforts to discharge their duties. Feeling sure of the earnestness and power of a strong and harmonious body of active members, the Executive Committee has been able to move forward with confidence and decision. While the officers are continually vigilant to further the interests of the Society, it has often been impossible to inform the members promptly and fully of all that transpired. While we may have given just cause for complaint in this respect, we have only to thank the members for their patience and forbearance under such circumstances, and to again remind them of the difficulties in our way. The Society has now reached such proportions in membership that we are obliged to rely upon the Annual Report to afford full and complete information of each year's work.

In October, 1882, Mr. Jacob H. Studer voluntarily offered to guarantee to the Society the sum of five hundred dollars with which to meet a portion of the expenses of the Third Annual Exhibition, to be held in New York, at a date not yet fixed. This offer was accepted, the date of the Exhibition fixed at December 4th to 16th, and a Board of Exhibition Commissioners elected, of which Mr. Studer was elected President. Owing to a misunderstanding, it was believed that a hall in the arsenal building, Central Park, could be occupied by the Society for exhibition purposes, and it was so announced. Later developments revealed the existence of a misunderstanding, for no hall could be secured there.

At a meeting held in Rochester on October 9th the action of the Executive Committee was ratified. Eleven persons were elected active members, and Mr. Geo. C. Hazleton, Jr., was elected Treasurer to fill the vacancy caused by the resignation, on account of removal to the West, of the Rev. Wm. Elgin. The Executive Committee having announced that the transportation charges would be paid on exhibits, Article 5 of the Rules and Regulations, relative to the payment of the same by exhibitors, was suspended until after the New York Exhibition.

It was further enacted that there should be created a department under the title of Honorary Exhibits, which should include casts of animals, sculptures, bronzes, animal paintings and drawings, skeletons, photographs, and all other objects which may be considered as models for the taxidermist. While there could be no direct and systematic competition between honorary exhibits, the judges were empowered to make such awards as they might find suitable. It was also declared that the list of special awards for the second Exhibition be continued in full for the third.

Early in November it became apparent from correspondence with intending exhibitors that on account of the pressure of holiday work and the late beginning made for the event, it would be a physical impossibility to make a display in December in New York such as the occasion demanded, and such as could easily be made at a later date. A postponement was advised and, upon consultation between the Executive Committee and the Board of Commissioners, unanimously agreed upon and ratified by the entire vote of the Society. The date fixed upon was April 2d, and Mr. Studer renewed his offer to guarantee the expenses of the Exhibition.

Shortly after this, and after spending both time and money to advance the interests of the Society, Mr. Studer saw fit to retire from the Board of Exhibition Commissioners, and also to withdraw his offer of financial support. For a time the prospects of the Exhibition were in a most critical condition, and the Society was threatened with a disaster which would have been almost overwhelming.

In this crisis the Secretary proposed to raise the necessary guarantee fund in New York by subscription, as a loan to the Society. The proposition was submitted to Mr. ANDREW CARNEGIE, who no sooner heard of the Society's embarrassment than he generously presented the organization, through the Secretary, unconditionally, the entire sum needed—five hundred dollars. This liberal gift, graciously and gracefully given, was neither more nor less than the presentation to the Society and the public of the New York Exhibition, for without such a fund the Exhibition could not have been held.

At a meeting of the Society held in Rochester on March 9th, 1883, the gift was accepted, and further action deferred until the general meeting. Mr. Studer's resignation was accepted. Dr. Joseph B. Holder, of New York, was elected President to fill the vacancy, and the name of the body changed from Board of Exhibition Commissioners to Board of Patrons.

Seventeen persons were elected active members, and the Executive Committee instructed in regard to the formation of a committee of judges for the Exhibition.

Although every effort was made to secure a hall for the Society in April, it was impossible to find one suitable which was disengaged. As a last resort the Committee was compelled to engage Lyric Hall, 723 Sixth avenue, from April 28th to May 8th, which action was ratified by the Society, and a postponement arranged accordingly.

Invitations to the number of about six hundred were issued for the opening reception, which was appointed for Monday evening, April 30th. A prospectus was also issued, giving the programme of the Exhibition and general meeting, list of officers, committees, and exhibitors, and other information.

The Society was fortunate in securing Professor J. W. P. Jenks, James C. Beard, and Daniel Beard for Judges.

On Monday, April 30th, the various exhibits were in place, and the Judges occupied the hall exclusively for the purpose of making their examinations. By their voluntary co-operation the Society was able to keep them in the most perfect ignorance of exhibitors' names until long after their report was complete. Out of the whole number of specimens in competition, the ownership of only two were known to any of the Judges. It is to be understood that the older members withheld many of their pieces from competition.

On the evening of April 30th occurred the opening reception, on which occasion the attendance was a flattering testimonial of sympathy and encouragement to the Society. Dr. J. B. Holder, President of the Board of Patrons, delivered a highly entertaining and instructive address to the Society and friends of the art on the past, present, and future of taxidermy, which will be found elsewhere printed entire.

On Tuesday, May 1st, the Exhibition opened to the public, and remained open daily from 10 A. M. until 10 P. M. The hall was admirably lighted, suitably located, and easy of access, making it very nearly all that could be desired for the purposes of the Society.

The first session of the Third General Meeting was held at Lyric Hall on May 1st, morning and afternoon. Thirty-five members were in attendance, constituting probably the largest company of taxidermists ever assembled. Elsewhere will be given a list of the members present at the General Meeting and Exhibition.

The General Meeting was opened by an address by President Lucas on the scope and needs of taxidermy, which was followed by papers by various members, all of which were discussed at length, and many new facts elicited.

The second session of the General Meeting was held on Saturday, May 5th, at which additional papers were read and discussed. The Judges' Report was presented with a brief but interesting address by Professor J. W. P. Jenks, who had remained during the entire Exhibition to perfect the work of the Judges' Committee. By his energy, patience, and self-sacrifice for the advancement of the taxidermic art, he has earned the sincere thanks of every taxidermist and every admirer of good taxidermic work. The report presented by the Judges for the New York Exhibition was by far the most minute, searching, and extended of any yet presented, and by those most interested was considered fairly above criticism.

The following resolutions were offered by the Secretary, and passed by a unanimous vote:

Whereas it has transpired that the Society is indebted to Mr. Andrew Carnegie for relief from all financial embarrassment in connection with its Third Annual Exhibition, and for some time to come, be it therefore

Resolved, That the Society hereby tenders its most grateful thanks to Mr. Carnegie for his munificent gift, which has alone rendered it possible to hold the present Exhibition; and also

Resolved, That, as a slight token of our appreciation, Mr. Carnegie be hereby elected an honorary member, and that the Treasurer be authorized to purchase the handsomest peacock screen and white heron medallion in the Exhibition for presentation to him as souvenirs of the occasion.

As usual, the General Meeting closed with a business session. Mr. Andrew Carnegie and Mr. Daniel Beard were elected honorary members, and twenty persons were elected active members. By vote of the Society it was decided that the next Exhibition shall be held in New York also, at such a time as the Executive Committee may appoint and be approved by a majority of the members. It was the universal opinion that it should be held, if possible, in October, 1884, and members are advised to prepare their exhibits for that date, subject, of course, to further and more definite notice.

The list of special prizes for the fourth Exhibition was made up before the close of the business session, and each item approved by a vote of the Society.

The Secretary read a letter from Professor Spencer F. Baird, Director of the U. S. National Museum, inviting the Society to make up and deposit in that Institution a complete collection to illustrate the present standing and the possibilities of the art of taxidermy. The character of the collection was fully explained by the Secretary, and its advantages to the Society pointed out. After a full discussion of the plan proposed, the Society voted unanimously to accept the offer and prepare the collection as soon as possible. Contributions were invited, and a number of the most choice and valuable pieces in the Exhibition were presented on the spot, a list of which appears elsewhere.

The Exhibition closed on the night of May 5th. The attendance during the display was highly satisfactory. Notwithstanding the fact that nearly two thousand complimentary tickets were sent out, the receipts at the door amounted to $548. The sales were sufficient to greatly encourage the exhibitors, amounting in the aggregate to $1,258. The press gave liberal and frequent notices of the Exhibition, which were of the greatest assistance. The thanks of the Society are due and are hereby tendered the *Commercial-Advertiser*, *Evening Telegram*, *Sun*, *Tribune*, *Herald*, *Forest and Stream*, *Harper's Weekly*, *The Daily Graphic*, *Scientific American*, *Courrier des Etats-Unis*, and other papers.

It would be highly ungrateful to omit an expression of heartiest thanks to Professor Henry A. Ward, who more than ever remains the Society's fast friend through storm and sunshine, whose aid is always given actively and freely, and who always lends a strong hand to help the Society over the rough places. Without his energetic presence in New York, both before, during, and after the Exhibition, the burdens of the officers would have been very greatly increased.

The New York Exhibition and General Meeting of the Society was an event which will be long remembered by all who participated, perhaps the most notable that has ever occurred in the history of taxidermy. Its success amply repays the labor and worry of months of preparation, and although it is a thing of the past, its influence will be felt for years to come, and it will forever remain as evidence of what American taxidermists can do.

WM. T. HORNADAY,
Secretary.

TREASURER'S REPORT.

I have the honor to submit to the Society the following account of its finances:

While the fact that there is a balance in the treasury is wholly owing to the generosity of Mr. Carnegie, yet it should be borne well in mind that another year the expenses will not be so heavy as during the last. There were unforeseen expenses in printing the catalogue; the cost of the Secretary's several trips to New York, and the repayment of sums loaned to the Society in 1881, amounting in all to $300. And in figuring on the cost of another exhibition this should be kept in mind. The income of the Society from annual dues is now about $150.

Respectfully submitted.

GEO. C. HAZLETON,
Treasurer.

WASHINGTON, D. C., *Nov.* 1, 1883.

RECEIPTS.

Presented by Mr. Carnegie	$500 00
" " Members	24 65
Initiation fees and annual dues	189 23
Sale of Reports	3 50
" " Badges	11 30
Freight returned for 1882	5 57
Insurance repaid	6 75
Admissions to Exhibition	548 85
Sale of Catalogues	54 63
Advertisements in Catalogue	55 00
Commissions on Sales	125 86
	$1,525 34

EXPENDITURES.

Printing Second Annual Report	$57 75
" Catalogue	209 10
Circulars, envelopes, letter-heads	19 23
Tickets, advertising cards, invitations	47 75
View of Exhibition	30 00

Advertising, signs, &c	$74 40
Stationery	12 58
Postage	29 00
Telegrams	13 24
Freight, expenses, and cartage	273 35
Rent of Lyric Hall for ten days	250 00
Doorkeeper, carpenters, and help	87 40
Lumber	14 20
Hardware and twine	11 22
Cloth for tables, &c	20 23
Insurance	10 00
Miscellaneous expenses	12 97
Secretary's expenses, three trips to New York	58 99
Professor Jenks, Judge of Exhibition	10 00
Badges	9 32
Screen and medallion for Mr. Carnegie	40 00
Rochester Printing Co., balance for 1882	13 65
Express “ “ “ “ “	25 00
Returned, E. L. Ormsbee	5 00
“ T. W. Fraine	18 46
“ J. F. D. Bailly	27 60
“ F. A. Lucas	100 00
	$1,480 44
Balance Nov. 1, 1883	44 90

ADDRESS OF DR. J. B. HOLDER.

FRIENDS OF OUR ART: We hail the present as the auspicious period of its history. The presence here of so many appreciative persons verifies most fully the accepted estimate of its value. Add to this the wondrous contributions seen at every turn in this sumptuous Exposition, and we may safely leave to futurity the destiny of such an art.

Taxidermy is now clearly accorded its legitimate rank; we now realize a consummation of hopes and desires that is the natural outcome of an enlightened conception of its possibilities; and—let us be just—this greatly through the genius of a few art-inspired and earnest laborers in the field.

That taxidermy has long been regarded as embracing some of the better elements of plastic art is true, but, in the nature of things, genius "came tardily on." The one who conceives a form of life, and desires to express it materially, seizes on such substance as most happily responds to his manipulations. The yielding clay offers a ready means. The student of art, or the tyro whose "itching palm" seeks some respondent material for his first essay, chances to select some furred or feathered skin, in lieu of the inorganic clay, less suggestive of life. The result in either case is an imitation more or less close to nature. To mould the form and express the action—all beyond depends on natural gifts and earnest study and practice.

We have seen the rising tide that brought the art to a successful recognition. We have seen that genius scorns not to ply in equal estimation the scalpel and forceps, the moulding-stick and chisel.

There is now distinctly before the student a glorious pathway, all honorably trodden from the earliest of man's enlightenment, and which now seems to enlarge its boundaries, and, perhaps, to divide, indicating a road as yet lightly worked by a few intelligent laborers, but which offers also an honorable career and possibilities, promising and fascinating in attributes.

The first authentic examples in this comparatively new art, with which we are familiar, are those produced through the patronage of the Prince Maximilian, of Nieu Wied, Germany. This distinguished naturalist had spent several years in exploring the bird region of North and South America. Equipped with every needful appliance for successful research, he included in the *personnel* of his staff a practical taxidermist; and the numerous species of American birds and mammals, embracing many types of great value, testify to the thorough exploration which the Prince accomplished in these regions. It was the good fortune of the American Museum of Natural History to come into possession of the entire collection of natural objects which formed the well-known museum of this naturalist; and thus, through this collection, we have representations of the earliest period of the art.

Among the numerous examples contained in the Maximilian collection are a number that yet bear the original label in the handwriting of the Prince. The frequent occurrence of "*Meiner Reiser*," (My Journey,) accompanied by dates from 1812 upwards, a period comprising a full three-score years and ten, is recorded testimony of great historical value. Unscathed as those specimens are by museum pests, they present a most satisfactory evidence of the reliability of arsenical treatment as a means of perpetuation well nigh indefinite. How much earlier the art was practised we have no definite knowledge. The numerous stuffed skins of reptiles, or rather mummies, found in the Egyptian tombs naturally claim our notice as perhaps the earliest examples.

An old narrative of the Carthaginian navigator Hanno has been recently verified through extensive research, and that portion relating to the original discovery of the gorilla may possibly have an interesting bearing here on the question of the antiquity of our art. It seems by this record that five hundred years before the Christian era this old voyager recorded the capture of gorillas and the preservation of their skins; or, as the record has it, "Having killed and flayed them, we conveyed their skins to Carthage." History also relates that these skins were preserved in the temple of Astarte, where they remained until the taking of the city in the year 146 before Christ, as stated by Pliny, who called them *Gorgones*. The history of the art of preserving skins would hardly be complete without the record of Shakespeare's apothecary, within whose

> "Needy shop a tortoise hung,
> An alligator stuffed, and other skins
> Of ill-shaped fishes."

In our own country, aside from the early work of the German taxidermist of the Prince's staff, which was probably nearly confined to the preservation of skins, we are unable to date farther back than the year 1828. As our venerable friend, John G. Bell, is so fully identified with the history and progress of the art here as to be entitled to its chief apostleship, we naturally turn to him for light and information on these earliest days. He associates one Scudder with his earliest recollections, as the proprietor of a small museum in the old almshouse, situate where now stands the stately court-house, in the City-Hall Park in New York City. Here was accumulated, in the cruder manner of the time, numbers of beasts, birds, and probably many of the endless *mirabilia* of the typical museum of the past. A little later another Briton, bearing the name of Ward—though not he of later fame—came to do work in the museum, which had merged into a somewhat larger establishment under the charge of the Peale family. Some excellent work was done by Titian Peale, and the museums of the Peales in Philadelphia and New York were important patrons of the art in those early days.

At this time Mr. George N. Lawrence, now distinguished as one of the most eminent of American ornithologists, became an earnest student of birds. Associated with him in friendly intercourse as an ornithologist was Mr. Daniel Holder, his merchant-neighbor in Water street. Both gentlemen were enthusiastic students and lovers of birds, and enjoyed the acquaintance and friendship of Audubon, Wilson, the Prince Bonaparte, Nuttall, and others nearly equally distinguished. While Mr. Lawrence collected largely of preserved skins, Mr. Holder indulged a passion for the beauties of mounted birds. His ample means were a power in developing the growing art.

It was about this time that our first impression of what a stuffed bird is was received. No railroad connected the New England metropolis with the suburban towns, save the one Providence line. Our relative in the far off New York had promised "a case of birds" on his next visit to the East. A big cage of living birds was, of course, in our untaught minds, all that was suggested. Surprise and delight quickly replaced our doubtful surmise, when the stage-top revealed, as it approached our dwelling, the remarkable display of a tree-load of brilliant-plumaged birds handsomely encased in all the richness of rose-wood and plate-glass. Here was a revelation. And one of the pleasant experiences of our later life was the friendship of the man who had impressed us as possessing such consummate skill. This personal application seems to exhibit as clearly as any, perhaps, the well nigh total want of knowledge of this art, even so near a great metropolis.

Some years previous to 1840 a Mr. Mann was established in Boston as a practical taxidermist. He was very jealous of his knowledge, and would instruct no one outside of his own family at any price, till in 1846 he so far relaxed as to offer instruction at $50 cash down before commencing. His style of work was of the old school, and purely mercenary; but having no rival in the city, he was kept busy till dotage ended his manipulations.

Soon after 1840 a Mr. Ogden came from England with both inherited skill in taxidermy and an enthusiasm that despised filthy lucre as the sole incentive to art. The Boston Museum had been established in Tremont Temple, and the Boston Society of Natural History had not long before been organized. Work was then in great requisition. We remember Ogden, with little assistance or none, struggling with the largest mammals as well as modelling the most delicate and minute birds. He had "set up" an elephant of goodly size, a giraffe of unusual height, which stand at this day examples of good art and the commendable ambition of the proprietor of the museum for those days. The larger carnivora, and a host of species of smaller mammals, birds, reptiles, fishes, &c., were worked up by Ogden at this time through the liberal orders of Mr. Kimball, who held proprietorship.

During this period the work seemed the very perfection of the art, and, indeed, much of it was exceedingly creditable. The superior art of our venerable New York friend evidently prevailed. Its influence was felt, and his examples of work were scanned with eager expectation as models fit for study and reproduction. As the result of this observation, several artists who have since made good work for the several prominent institutions of the country adopted the art as a profession.

Our history can hardly be regarded as complete without recording the names of the few taxidermists who were in these early times prominent, but we are not able to go further than the goodly vicinity of Lynn, Mass. Mr. Abel Houghton, a man of many amenities and at that time a notable horticulturist, had the good fortune to have access to some of the best work then done in New York. He gave much time to its study, and became a most enthusiastic worker, though wholly for his own pleasure.

Mr. Samuel Jillson, then of the same town, but long since removed to New Jersey, where he yet resides, was the first and for a long time the only person known to us as pursuing the art for professional purposes outside the metropolis. He had the benefit of Mr. Houghton's teaching, and both, as we can testify from considerable personal observation, studied the few models which had come to them with great admiration for their author. The cabinets of the Essex County Natural History Society, Salem, Mass., and that of his own town possess the work of the former, and societies and museums more distant, as well as near home, enumerate many excellent specimens of the latter's work.

The museum of old, which did not always encourage the best art, has since passed, and the scientific museum, which calls for the best and a great deal of it, fortunately for taxidermy, has taken its place.

The initiation of the great geological and topographical surveys of the far West led to a call for taxidermists of skill, and each considerable division of the respective surveys included as an important member of its staff a naturalist who numbered among his varied attainments that of the art represented by this Exhibition. Many of the newly-discovered species of birds and mammals were first noticed through the trained eyes and ears of this valuable adjunct to the survey. During Audubon's extended tour throughout the Western plains he was accompanied by an employed artist in taxidermy, whose remarkable faculty for detecting the notes of birds served him (often in spite of the master's pooh-poohs) in giving science new and interesting species. The familiar names of the discoverers, in not a few cases, remain attached as generic or specific terms to their perpetual honor.

The Smithsonian Institution now became a sort of patron of the art on a large scale, both through the publication of directions for the preservation of specimens, and by furnishing ways and means by which parties going out could successfully explore the regions likely to furnish desired material. Artists in taxidermy were fitted out there for all parts of the world, known and unknown—for the Tropics, for the Arctics and for the Antarctics, for the Atlantic and the Pacific, for the forest and plain, and for the deep sea. The vast storehouses of our museums now attest advantages accrued therefrom; and this is the work of a few short years.

We have seen how nearly the art was a mere cypher within the early recollection of some of us. The present period now recognizes the art as one of great capabilities, and many are the workers who strive to see them realized. The excellent work of the French artists was early appreciated, and, doubtless, it had some influence in the development of the genius of our own. This foreign work came now to be seen in many of the best collections. The names of Verreaux, Verdey, and others have become familiar in connection with most superior art; and this work has, without doubt, served an important stimulus to many who, like painters and sculptors of obscure residence, feel the want of good models and good schools for their art. There had seemed to be, so to speak, a timidity, or possibly a lack of the spirit of inquiry and study, for we cannot surely attribute to our artists of the time any want of capacity. It was a new thing, this moulding the skins of quadrupeds and birds and fishes and snakes to resemble the life.

Just as in every other art, this timidity vanished by degrees, especially when one more bold, and possibly a trifle more inventive, sent forth an example a step further towards the ideal. We see how in this way our artists have taken up the hints, and how well they have been able to handle them for the extension of their art. The lack of really good models has been one means to retard the best efforts. Wilson's plates were among the first models, but unfortunately the figures were not always happily posed; the characteristic attitudes and the certain peculiar anatomical features, that give expression, in some instances, *sui generis*, were not observed or embraced in the engraving. The result is a sameness in appearance and lack of natural attitudes.

Audubon's figures were too expensive to be generally available—more 's the pity—for though there is much in his display of attitudes that seem in a measure *outre*, or over-strained, yet doubtless there is very much of nature in them. It is quite likely that such works as Wood's, Brehm's, Cassel's, and others like them, have had an extended influence for good, the most of the figures being admirably drawn.

Of course we look for a goodly amount of observation and record from personal field duty. Many of our artists are familiar with the gun, and look to the seaside and woodland for their material. The characteristics and habits of birds and quadrupeds are observed, and notes made from time to time, which should be of immense advantage to the practical taxidermist. We could wish to see every artist provided with a portfolio, in which he may enter every scrap of drawing or engraving which may appertain to his art. Better, we would gladly see him storing his portfolio with sketches from his own pencil. Most persons can learn the art of drawing; and we are glad to know that the very species and degree of intellect and talent that makes the good taxidermist also makes him a natural draughtsman, or one capable of being taught. Indeed, the art of taxidermy is now so well developed, its possibilities are so thoroughly known, that it behooves him who would be a successful follower to exercise all his best faculties. Most superior results, most exquisite, most surprising modelling of pelt and feather are now common in the rooms of not a few American taxidermists. There can be no success in lagging behind.

There would seem to be much in the art of modelling in clay or other material that would teach the eye to catch the requisite form readily. Indeed, all appliances that aid in the advancement of the artistic faculties are to be welcomed. Close observation of nature, of living natural forms, their characteristic attitudes under the various conditions likely to occur, all are of infinite service. We may take this opportunity to illustrate our immediate theme by referring to an incident in our First Annual Exhibition, which was holden at Rochester. A piece consisting of several long-legged and long-necked birds, with some very pleasing accessory objects, including the quite unique nest, was under consideration. The Judges, as well as those who had examined the group, very naturally were prepossessed in its favor as a suitable subject for the first prize in ornithology. Yet this beautiful and skilfully prepared piece of taxidermy, which was manifestly the most artistic group of birds in the Exhibition, was rejected. It seemed at the time a sacrifice to hypercriticism. It proved to be more; it was an error. One of the feet, which in some species of birds having the legs extended, as in this case, would naturally bend abruptly in the instep, was placed flatwise upon the ground, and this was judged to be a defect. A reference to the attitude of the living bird showed the artist to have been a close observer; he was correct. An instantaneous photograph of a similar bird plainly indicates this feature—the feet placed flatwise upon the ground, while the legs are considerably extended. This may teach us to look more closely to living examples. It was a fortunate circumstance that, great as was the injustice to the eminent exhibitor, his pride was not, we may hope, deeply wounded; especially, let us say, as he had borne off other important honors, and is known to number among those who are ready to sacrifice much and exercise great talents for their favorite art.

We are reminded in this connection of the singular attitudes of birds shown in Charles Waterton's gossipy book of "Wanderings." Several herons are figured in most grotesque yet presumably natural positions, among them an Egret asleep. The Flamingoes are pictured in most extraordinary attitudes, seemingly too grotesque to be at all natural; yet they are vouched for as actually seen in the Zoological Gardens. They appear like some abominable professional man contortionist in his horrible evolutions, only in this case the action is natural and not painful.

An example of the absurdity of treatment sometimes seen is that of the pigmy deer, one of the very small antelope-like animals of the group of Chevrotains. Its natural attitude is anything but that of the deer, or possibly it is that of some species that carry their hind quarters in a crouching or half-sitting attitude. This little creature, when erect, looks as if it were about to sit. It has the timid attitude of the hare. Yet how frequently we see the pigmy creature stuffed and set up after the model of a deer, entirely to the ignoring of nature. Indeed, we have seen more than once this delicate creature, no bigger than the smallest black-and-tan dog, set up in all the added glory and dignity of adult antlers, made to order; the graceful appendage, so appropriate to the deer tribe, being, as is well known, superfluous and unnatural in this pigmy form.

Waterton's figure of the scarlet ibis is extremely strange, yet it is a correct drawing from the living bird.

Regarding the attitudes of birds, we hope to see more attention paid to the study of sea-fowl, especially the long-necked kinds—the cormorants, snake birds, and the like. Their attitudes are often graceful as well as singular. One of the most remarkable examples perhaps of the unlooked for display of individual peculiarities is that reported lately in *Nature.* A species of humming-bird was observed (in most instances the young males, sometimes the adult, but never the females) to flutter opposite each other, with bodies perpendicular and parallel, as if engaged in a quadrille, first two forward and back-like. The most remarkable part of the performance is seen in the extension of a single tail-feather from each side, at a right angle with the body, the quills ends nearly touching each other. These feathers now rotate sufficiently to present their flat surfaces horizontally. This singular attitude is not likely to be copied at any time by the taxidermist, yet it is a part of his study to know the various positions peculiar to each creature he may be called upon to manipulate.

Waterton, in the enthusiasm of his art, and in his quaint language, says: "If you wish to excel in the art, if you wish to be in ornithology what Angelo is to sculpture, you must apply to profound study and your own genius to assist you; and this may be called the scientific requisites. You must have a complete knowledge of ornithological anatomy. You must pay close attention to the form and attitude of the bird, and know exactly the proportion each curve or extension or contraction or expansion of any particular part bears to the rest of the body. In a word, you must possess Promethean boldness and bring down fire and animation, as it were, into your preserved specimens. Repair to the haunts of birds on plain and mountain, forests and swamps and lakes, and give up your time to examine the economy of the different order of birds. Then you will place your eagle in an attitude commanding, the same as Nelson stood in the day of battle, on the *Victory's* quarter-deck; your Pie will seem crafty, and just ready for flight, as though fearful of being surprised in some mischievous plunder; your Sparrow will retain his wonted pertness, by means of placing his tail a little elevated, and giving a moderate arch to his neck; your Vulture will show sluggish habits by having his body nearly parallel to the earth, his wings somewhat drooping, and their extremities under the tail instead of above it, expressive of ignoble indolence." This is the outburst of the generous and kindly old naturalist, after his long life of adventure and studies of nature. Further on, concluding a series of details concerning the preparation of birds after his extraordinary methods, which are known to most, our eccentric and learned author adds: "Should you find these instructions too tedious, let the wish to give you every information plead in their defence. They might have been shorter, but Horace said: 'By laboring to be brief you become obscure.' If by their means you should be enabled to procure specimens from foreign parts, in better preservation than usual, so that the naturalist may have it in his power to give a more perfect description than has hitherto been the case; should they cause any unknown species to be brought to public view, and thus add another to the page of natural history, it will please me much. But should they, unfortunately, tend to cause a wanton expense of life; should they tempt you to shoot the pretty songster warbling near your door, or destroy the mother as she is sitting on her nest, or kill the father as he is bringing a mouthful of food for the little ones, oh! then, deep would be the regret that I ever wrote them."

The relations of the art of taxidermy to museums of natural history are of the greatest importance. While formerly museum collections languished as poorly sustained, now, through the great advance of the art and its contributions of tasteful and natural material, much more interest is awakened and exercised. Heretofore the fishes, reptiles, birds, and beasts were so many stuffed horrors, too absurdly prepared for any one's pleasure, save the enthusiastic student, to whom even the *olla podrida* of the old-time museums were wholesome *pabulum.*

But it was not in the nature of things that persons of taste and fair judgment in what relates to form or color could inspect with pleasure the specimens of the olden time. What a change has come about! In the old country we hear of the great mass of objects, numbering among them very many of the specimens that have been described to us in years past—have been pictured to us in primers and reading books. We hear now of these old historic things being taken out into the fresh air and beaten of the dust of a century, some to be cast away, others to play the part of duplicates for the student's use, while the better parts are placed in the great storehouse at Kensington, where new architecture and new art prevail. Many a rarity or many an object, become invaluable through historic associations, will be cherished as before, but the new art will prevail. So with the collections of Jardin des Plantes, so at Hamburg, so at Berlin.

In our own country, fortunately, our museums are too nearly contemporaneous with the better art not to very considerably profit by its excellencies. The Smithsonian, Agassiz, the Museum in Central Park, and some private cabinets, or those connected with colleges, all have their pet pieces of taxidermy, as well as the pet "new species," which formerly so claimed the affections of the naturalist. The old museums of natural history failed to hold the interest of the public. In our own time, even, some of the largest of them have had their uncertain fortune. In some towns of eastern New England local societies have risen, faltered, and died more than once during the short period of half a century.

Of course this is not altogether due to a lack of good taxidermy; good art is, however, a mighty power, and we now begin to see how influential it is. We may need no other evidence than a visit to Rochester to the great natural history establishment of Professor Ward & Co. No description will give an adequate idea of this wonderful adaptation to the modern wants. It is a revelation of the newer age. It would seem to be unnecessary to allude more fully to this great depot of taxidermy, knowing as we do that it is familiar to the peoples of all quarters of the globe, as much, probably, through the personal presence of its founder, who to-day may be with us in all the hearty co-operation of his genial nature, and anon overlooking the shipment of a herd of Elephants in India, or carefully gathering the skins of the gorgeous birds of the Pacific isles. So vast is this establishment, and so numerous the departments, the proprietors find it advantageous, both to their customers and to themselves, to publish a handsome Bulletin. A copy of the first number, containing the salutatory, issued in 1881, states that "the constantly increasing business, and demand for explanatory correspondence concerning it, renders the issue of a regular news-sheet almost a necessity as a matter of self-defense, even though its publication should be prompted by no higher motive."

What a grand enterprise is this, free from all narrow-minded policy, offering all reasonable opportunities to younger aspirants, and even publicly offering to assist the inquirer with all proper information!

In an historical sketch in this Bulletin we notice that the founder first had his attention drawn to the public or commercial footing through the demand made in all quarters for the superb casts of the numerous remarkable fossil forms he had collected for the University at Rochester, where he had been engaged as professor of geology.

We come now to consider one of the most important results of the new departure, the inception and organization of the Society of American Taxidermists—the first, we believe, that has come into existence. In March of 1880 the taxidermists of Rochester, in New York, where many of the best artists had practised, considered the feasibility of forming an association for the advancement of their art. Several foreign artists had been employed here, but there had grown up some in our own land who readily advanced to the first ranks. Given such *personnel*, with the ambition and vigor incident to it, it was inevitable that some intelligent movement would be made to break up the "apathetic mediocrity lately prevailing." The great difficulty heretofore experienced, as has justly been remarked by one of its founders, was the supposed professional jealousy of the taxidermists, and, it was added, "We are proud to see that the taxidermists of America are the first to rise above the spirit of jealous exclusiveness, which they naturally inherit, and join hands in a cordial and united effort to elevate the standard of taxidermic work in general, and to improve themselves in particular."

We have seen the Society organized; we have witnessed two successful Annual Expositions of the taxidermic art; and now a third display, incorporated in this Annual Fair for the public inspection and enjoyment, that fairly rivals in its refined and tasteful objects any public exhibition that this great city has ever witnessed. Well may the friends and members of this new Society feel proud of its achievements; well do the officers and promoters of this cause deserve the gratifying success that has come to them.

And now, at the dawn of this third Exposition, let us hope that its brilliant and truly unprecedented display will mark a period in the new art which will in the future be recalled as the full-flowing tide of its successful establishment.

THE SCOPE AND NEEDS OF TAXIDERMY.

ADDRESS OF THE PRESIDENT, FREDERIC A. LUCAS.

And having thus briefly reviewed the progress of the Society during the past year, I wish to say a few words regarding the scope and needs of taxidermy. And should any of you take exception to some of my remarks, or consider some of my ideas as visionary and impracticable, you must remember that I am treating taxidermy as we hope to make it, not as it too often really is. As painting and sculpture owe their origin to man's desire to copy and preserve the forms of familiar objects, so taxidermy undoubtedly originated in some one's attempt to preserve the animals themselves. Just where or when the first attempt was made is unknown, but it was most probably in Europe, and at all events not long ago. While all taxidermy is thus comparatively modern, artistic taxidermy is still more recent, so much so that there be some who, like Polonius, swear we use no art at all. But if he who transfers to canvas an animal's form, or carves it in the enduring stone, is an artist, I think that he who evolves from a shapeless skin a creature having the semblance of life is entitled to be called an artist also. And that taxidermy is artistic which preserves not merely the form, but catches the spirit also, or, in the case of birds, reveals their beauties to the best advantage. At first art was limited to a mere copying of objects, but as it progressed it ceased to be merely registrative in character, and the artist strove to embody his thoughts and feelings in his work, and to make the canvas or marble expressive of his ideas. Now this is something taxidermy cannot do, for although in some of its branches it is capable of caricaturing to a certain extent, it is *strictly* speaking the art preservative. The taxidermist cannot group his animals into pictures placed under ideal conditions of light and shade, but must depend for his success on the skilful rendering of the animals themselves. What he *can* do is to show them in their varying moods, to teach us how they look when tranquil and pleased, how when alarmed or angry, and to do this properly is a task not far removed from that of the sculptor. If, then, the aim of the taxidermist is to hold the mirror up to nature, and faithfully reproduce the forms and expressions of animals, his art should not be treated as an easy one, or one of but little value. As the artist makes it possible for us to see the beauties and grandeur of a landscape that we can never hope to behold for ourselves, so it is on the craft of the taxidermist that we must rely for our ideas of most animals, and on the amount of his skill depends the correctness of our impressions. Man is a great destroyer, and our wild animals, and especially the larger ones, are being rapidly civilized from the face of the earth. Sooner or later the time will come for many of them when their mounted forms preserved in our museums will be all to show that they once existed. I do not forget, as some one might suggest, that we have drawings and paintings to refer to; but, passing by the objections that these are largely inaccurate in form and faulty in color, the fact remains that none but the very best of paintings produce anything like the impression aroused by the animals themselves. We may admire a painted Tiger, but we feel no dread of him, and while we may realize from the figure of an Elephant that he is large, we still fail to fully appreciate his true size. Where is the picture that conveys an adequate idea of the repulsive appearance and quivering bulk of the Rhinoceros, or one even that depicts a Buffalo as he actually exists? The Buffalo, as usually portrayed, is a sort of hump-backed Lion, with a pair of horns added, and hoofs instead of claws—a very caricature of nature. Do not mistake me as implying that the taxidermist invariably does his subject justice, but I wish to show what he can and ought to do. Here, then, is the great field for the taxidermist to place before the public animals from all climes and all countries as they appear in their native haunts. The field is a wide one, and if it has been but little cultivated it is in a great measure because our museums are not what they should be in the character of their specimens. But already there is a faint rustle among the dry bones and lifeless skins, and I think the day is coming when we will witness a revolution in the style of our museums. Two points there are which our museum authorities are beginning to recognize; first, that they are largely dependent on taxidermists for their most attractive and instructive features; and, second, that there is a difference in the quality of workmanship. Hitherto almost anything has been accepted, provided it was cheap; but that day is passing, and specimens are beginning to be viewed with a more critical eye, for the fact is being realized that low-priced work is not always the cheapest in the end. In the great museum of this city the past year has seen a vast weeding out of poor specimens and their replacement by better ones. The Cambridge Museum calls not for the cheapest work, but for the best, and the National Museum has begun the laudable task of substituting the best of work for its many stuffed monstrosities.

Can we but live long enough we shall see our American museums leading those of the Old World in the quality of their material. And, gentlemen, I am proud to say that the men who are doing this good work are almost without exception members of this Society.

As taxidermy is limited in its picturesque qualities, so it is restricted in its availability for decorative purposes. This is largely owing to the injury which mounted animals receive if they are handled, and the consequent difficulty of subjecting them to the same treatment as other materials used for decoration. We must carefully distinguish between taxidermic work that is decorative in itself and that which is simply accessory in character. In the case of a finely mounted head attached to a rug the head is merely an adjunct to the rug, enhancing its beauty. A well mounted head on an appropriate shield is an example of taxidermy decorative in itself. Not that I by any means object to the head being on the rug; only it must be considered as a secondary, and not as the leading motive. If we make use of elaborate frames and mountings or finely painted backgrounds, the taxidermic portion is subordinated, and becomes merely a portion of a pleasing whole.

A screen in which the taxidermist's work is limited to a few small birds is a pleasing object; but remove the birds, and it is handsome still; whereas if *they* formed the decorative part their absence would destroy the beauty of the piece. Backgrounds should be suggestive in their nature rather than imitative, and not of such character that we would care to preserve them for their own sake. Otherwise we are apt to overlook the animals for the sake of their surroundings. For decorative purposes we must for the most part rely on the graceful forms and glowing colors of birds, and the artistic treatment of these consists, like the skill of the portrait painter, in catching their very best expression and most appropriate pose. Ninety-nine times out of a hundred an Eagle has nothing noble about him, and he who catches and renders aright the hundredth expression and makes the bird to live again, with flashing eyes and tense muscles, is worthy the name of artist. The main scope, then, of the taxidermist's art lies in faithfully reproducing the expressions of living animals; but it is becoming more and more apparent that his skill is capable of producing a great amount of highly ornamental work, which, while not taxidermy in the strictest acceptation of the word, cannot be successfully undertaken by any one but a taxidermist.

At the outset I had occasion to meet the objections of those who deny that taxidermy is an art, but only too often I fear that their allegations are true, for many a specimen is mounted in such manner as to present no claim to any art, except in the broadest meaning of the word—that it is not nature. This lack of artistic qualities in our work is largely owing to the newness of taxidermy—a newness which tells against us in many ways. All arts in their inception are barren of attractive features, and it is not to be expected that ours is to be an exception to the rule, the more that taxidermists have generally taken great pains to keep their methods and experience carefully concealed, for fear that some one might profit by their ideas. So instead of having a good foundation of accumulated facts to build upon, and being carefully instructed at the very outset to avoid errors and profit by the results obtained by his predecessors, every beginner has had to commence anew, and from this state of affairs has resulted a remarkable uniformity in doing poor work. Right here is where the painter and sculptor have a vast advantage over us, for they have at their disposal a vast fund of accumulated knowledge and experience. Theoretically, if all study nature, all will come out aright, but a practical difficulty lies in the fact that the eye needs educating as much as any other portion of the body; otherwise it will not see things as they are. No one can draw well until the eye has been taught to see correctly and the hand trained to record what the eye sees; neither can the form of an animal be properly seen and reproduced by the taxidermist without this same training. Now, owing to the exclusiveness of the craft, the majority of taxidermists are without any training whatever, and not only are they not taught to distinguish between the good and the bad and to acquire a knowledge of form, but many are even ignorant of the simplest mechanical methods necessary for the accomplishment of certain results. There are taxidermists, and good ones too, who do not understand how to properly clean a soiled skin, while those who realize the importance of thoroughly relaxing a dried skin, or who can correctly make the neck of a Heron, may be counted on one's fingers. With this ignorance, both of artistic and mechanical principles, it is not to be wondered at that our birds and mammals are so deficient in form and feature, and to change this unhappy state of affairs is one of the great objects of this Society. First and foremost, reform, like charity, must begin at home, and if we can change the taxidermist somewhat the work will change itself. Let us to begin with study carefully the forms of the animals we work upon. I know that this advice seems almost superfluous, and yet too often our finished specimens are creatures of our imagination. This false method of constructing an animal to fit our theories and evolving him from our inner consciousness can but be productive of equally false results. Animals have a perverse and unhappy habit of assuming impossible attitudes, and doing exactly those things which theory tells us they can *not* do, and I have been tripped so often myself that I feel quite at liberty to say that we should be careful how we condemn a piece of work simply because it does not correspond to our ideas. The greatest aid to a proper rendition of an animal's form is a knowledge—if but a slight one—of the construction of its skeleton. Nor is this nearly so difficult to acquire as might be thought. A careful study of a few skeletons will teach the fundamental principles of osteology, and show to a great extent what attitudes are and what are *not* possible.

Take for example long-necked birds, like the Herons, and a very brief study of the bones of the neck would prevent the unnatural and impossible poses so often given them. No sculptor would dream his education complete without a thorough knowledge of the skeleton, and if we would secure the best results we too must devote our attention to the subject also. My word for it, a little time devoted to anatomy would be well repaid. Good photographs, too, are something we greatly need; and now that it is comparatively easy to photograph animals in motion, we trust that ere long some enterprising individual will give us a series of views taken from living specimens. Such views are invaluable, and a taxidermist who is striving to do correct work should lose no opportunity to procure them.

Having studied nature, the next thing is to show by the excellence of our work that we have profited thereby. It will not do to say that there is no demand for good work, and that we cannot afford to produce it at the ruling prices. Every one else, whose productions are superior in quality, puts his price up on account of that very superiority, and we must do the same thing. Once prove our ability to do fine work, and the demand for it will surely follow. Finally, let us compare our work one with another, freely admitting that our own is perhaps not perfect, and striving to profit by the excellencies of our neighbor. We must get entirely rid of the idea that but one man is master of the art, and that that one man is ourself. For, unhappily, there is a tendency among some—who are of course not members of our Society—to indulge in that idea. We need not be afraid of comparing work and telling how it is done, for no mere knowledge of methods will give the artistic eye and skilled hand necessary for attaining the desired results. Briefly, then, study of nature, comparison of work and methods, and liberality of thought, are needed among taxidermists themselves; for certain other help we must look to others. This other help is good criticism. We need not alone critics who can find fault—those we have in abundance—but those who can tell us how to remedy our defects and point out our excellencies. Criticism is like a boomerang. Skilfully thrown, it attains its mark; but in untrained hands it is very apt to recoil upon him who casts it. One might suppose that field naturalists were just the ones to help us, but my own experience has taught me that, as a rule, the field naturalist is quite untrustworthy. He studies nature, it is true, but he studies one side only—the *habits* of animals—while with their forms and attitudes, and the manner in which attitude is expressive of feeling, he is but little acquainted. The trouble is that, unless a man observes an animal with special reference to form, he fails to catch the details, and grasps merely the general effect. But if we can expect but little aid from the naturalist, we must look to obtaining it from the artist—only—it must be the artist who has gathered his knowledge from living animals, and not from models. Let him not rely on models for anatomy. Have I not seen dogs made with fifteen pairs of ribs, and lions and tigers represented ambling? And yet these were made especially for artists. But the criticisms of good artists can most assuredly benefit us—for they, if any one, are trained to a proper perception of form, and know the relations between attitude and the expression of emotions. They can aid us, too, by giving us correct sketches of uncommon animals; but, above all, the artists can help us by pointing out to the public the distinction between superior and inferior work, and teaching them to properly appreciate the former. For one of the greatest obstacles and severest trials that taxidermists have to contend with is the total inability of the majority of people to distinguish good work from bad. To most of them a stuffed bird is a stuffed bird, be it good, bad, or indifferent; and it is positively painful to hear the praises often lavished by intelligent people on inferior work. Undoubtedly taxidermists are largely to blame for this state of affairs by not producing more work of a high quality, but equally undoubtedly the public must be educated in order to appreciate it. This once done, taxidermy will be held in greater esteem than now, and better days will be at hand for us. And while we need all the help we can obtain, we must mainly rely upon ourselves to bring about this result. Herein lies the great advantage of our Society, that it enables us, by combining our strength, to accomplish vastly more than by our individual efforts. Our exhibitions bring together the best work of our best men, and while we are educating the public by its display, we are also educating ourselves by the opportunities thus given for comparison of ideas. Not only this, but the Society creates a bond of union between taxidermists and promotes the best of feeling among them by uniting them in a common cause. We must not expect to win without a struggle and be disappointed because we do not at once achieve complete success. Anything that is worth having is worth working for, and if we really wish to elevate our profession and thereby benefit ourselves we must strive earnestly to attain our end. And there is no better way to do this than by heartily sustaining the Society, and I think the event will prove that he who does the most for the Society is also doing the most for himself.

TAXIDERMY AS A DECORATIVE ART.

BY FREDERIC S. WEBSTER.

MR. PRESIDENT, LADIES, AND GENTLEMEN: In preparing this paper for the General Meeting of this Society I am conscious of two evident facts: First, that the time allotted me is not sufficient to do the subject justice; second, that my inability to place it before you satisfactorily in all its various phases is too conspicuous.

I will endeavor to be unconscious of the grim visage of the latter staring me in the face, and point out a few interesting facts in relation to the subject, and also offer a few suggestions in connection therewith.

Before I deal directly with the subject I want to make a few remarks upon the drawbacks and hindrances that taxidermy has suffered. I believe it is not until recently that taxidermy has been considered an art. I have for many years been laboring in and studying taxidermy, and have sought every nook accessible to me in order that I might ascertain who in the human race was first bold enough to declare that taxidermy was an art. I am reluctantly forced to admit that I do not know. History states that taxidermy proper was practiced as an art for the first time about the year 1753. At this time (and it is to a great extent true to-day) the only demands made upon the taxidermist were for simple museum specimens.

Museums, colleges, and other institutions of like character in earlier years desired only "*quantum sufficit*" of specimens, which they stored in dark and illy ventilated rooms. This, I am forced to say, is the sad state of affairs, to a great extent, existing to-day.

Speaking in a general way, none of them for a moment examined the quality of the immense collections entrusted to their care. No standard of excellence was established, and the persons plying the art forced to come up to that standard, and place in friendly comparison their different productions, and in this way stimulate the various competitors in a healthy improvement, which in due time would ultimately culminate in steady progression.

Some charity of feeling is due these earlier patrons. They did not neglect to perform the duties devolving upon them from a lack of interest in the matter; on the contrary, their course was the outcome of absolute ignorance—they simply did not know; they had no exalted ideas of what to them appeared as a mere mechanical trade. They could not bow before a shrine that had no existence, and pay tribute to a god that as yet had not appeared before them. To these men, who are now beyond the assaults of living creatures, a spirit of forgiveness should be manifested, and I for one most willingly extend the forgiving hand.

Would that they had been wiser, more exacting, and even unrelenting in their criticisms, and fairly persecuted the earlier taxidermists until they cried for quarter, and thus brought them to an understanding of what they might do to establish taxidermy as an acknowledged art, and elevate it well beyond the caustic eye of the skeptical critique. Had these men labored and sought to attach to taxidermy the importance that it warranted our labors of to-day would be far easier, and this present Exhibition would not stand before the people of to-day as experimental, being clothed in the sober grey garments of uncertainty, but in the established ranks of the true and meritorious arts.

I cannot pass by without uttering a rebuke to those who have had it in their power to assist in elevating the cause we espouse and have failed to do so.

And now that we are convinced that they have erred in the past, it is for the present and future generations to jump out of the well-worn ruts of the past into the broad light of a new future. This shadowy picture is somewhat dispelled by the rapid stride that taxidermy has taken in the last ten years. A change—a radical change—has taken place in these few years. The cold indifference indulged in, linked with the imperfect education of the pioneer patrons of taxidermy, is fast disappearing. Our more advanced and liberal educational institutions are moving in the right directions. They see that what has hitherto been considered a mechanical trade, has in it the elements of a true art; that what has been considered as mechanical skill is now being demonstrated as artistic skill. A delicate sense of the latter must enter into every production, or a stiff and awkward result is certain. The true students of nature now yield the point that taxidermy is a true art, and is honestly entitled to such a distinction.

This change is gratifying in the extreme, for the beneficial results accruing from it are already manifold. That we have witnessed such a change no liberal mind can deny. This being the case, a new field has been opened to taxidermists. It has made it possible for them to move on, encouraged in new channels, and devote their skill and taste to things of a higher order of excellence.

When the public demands a standard of work, and that standard is high and unrelenting in its exactions, then the workman—mechanical or professional—comes under a pressure that forces him to improve, or he must inevitably go under; and in order for him to rise and succeed, he must cater to the demands made upon him. If it is tainted with a narrow and uncompromising spirit, the only course left for him to pursue is to launch out as clear of the obnoxious idea as possible, and prove by his efforts and productions that true merit has been unrecognized and unrewarded.

I fear that we taxidermists, as a profession, suffer the ignominy of the greater portion of those who could be warm friends and supporters of a class of men who have furnished the savants and scientists of the entire world with vast collections of the zoological kingdom for study and classification. Natural history—especially zoology—would be to-day but a very incomplete and heterogenous mass of facts if it were not for the valuable aid rendered by both amateur and professional taxidermists.

The self-sacrifice of the scientists of the world has been shared by those who have followed taxidermy as a profession. Taxidermists, as a rule, are but poorly remunerated.

The profession has never attracted many men to its ranks as a paying investment. Its devotees have generally been drawn to it out of a pure sense of the love of nature. I regret to say that it has sometimes been invaded by those who have expected to make money, and these cases are the ones that have brought to it the least talent and ability.

Taxidermy to-day, as I see it, is divided into two distinct classes, viz., Museum or Institutional Taxidermy, which is conservative and settled, and Decorative Taxidermy, which is radical and progressive. To one or the other every taxidermist by the diversity of the nature of the case must belong. By a museum conservative I do not mean a man that is without ability or artistic skill, but a man whose position or class of work demands from him the stiff or contracted style of work the average institution demands—mark you, demands. Their demands may be reasonable to a certain extent, but too often the strict commission comes to the taxidermist: No fine work, no fancy positions—we want plain, straight styles. That simply means a lot of specimens of the "straight-jacket" order, and they usually get them without any difficulty.

Now this state of affairs has existed for many years, as far back as history dates. When the first specimens were placed in the foreign institutions, and from that day almost to the present time, the art of taxidermy has struggled to rise.

It is a good deal like keeping a blooded horse carting stones before a fifteen-hundred pound cart, and expecting him to develop into a trotter.

All honor to the institutions that have supplied the fraternity with work, and have made it possible for the taxidermist to live.

Although they have sustained the taxidermist largely, the limited demands made by them upon his talent has not been such as to develop artistic skill, but on the contrary has been pernicious to a great extent. This condition of affairs has offered no incentive to improvement.

I believe I have stated some of the principal reasons why a higher degree of excellency has not been reached in the taxidermic art, and will draw the line here, and proceed to consider the effects of decorative taxidermy upon the entire art. Decorative taxidermy, in my opinion, is the radical agent at work. It is this agent that has brought forward the higher class of work. Some of its ideas are whimsical, if I may so term it; yet, with all this, it is to the follower of the radical side of taxidermy that we must credit the impetus given to progression. It is likely to meet with opposition from many sides, but there is an underlying current which will work silently but effectively, and I have no hesitation in saying that the time will soon come when the artistic side of taxidermy will have in its ranks the best talent in our profession. I find individually from experience that the greatest amount of satisfaction and benefit is derived from an association with taxidermists who have become liberal in their methods and progressive in their ideas. It affords me much pleasure in being able to say to you that our Society is mostly, if not entirely, made up of men of this class. I am sure that we have had abundant evidence of the versatility of its members, and a steady progression of the Society generally.

In short, our Society may be said to be a radical organization, and as such is sure to progress, no matter what internal or external drawbacks it may meet with. The various catalogues of our exhibitions present each time the pleasing feature of a steady and unmistakable evidence of improvement.

Decorative taxidermy may be said to be a branch of the art but recently developed. I have good information and data when, where, and by whom was made the first pieces of taxidermy entitled to this distinction. What is meant by decorative taxidermy? you may ask. I will endeavor to give you my opinion. It is not as easy to define it as I could wish; but if you will leave out entirely the old styles of cases which have a quantity of birds, and a still greater quantity of green moss huddled together in attitudes meaning nothing, and which are no way in keeping with their natural habits or external characteristics, you will do me a favor and relieve me of the necessity of condemning the style very strongly.

If decorative taxidermy must include the conventional case of stuffed birds, which is generally seen, I will be obliged to hurt some one's feelings. For years the public eye has been compelled to look at the only style of taxidermy that could be produced, viz., a glass shade or a square box of stuffed birds as the only possible production of the aspiring taxidermist. You need not wonder that the art does not stand more in favor. It never will until taxidermists produce skilful pieces that shall arrest the eye and command admiration, both on account of the combination and their style of mounting.

Nature provides us with creatures in endless number, wonderful in color, vieing even with the precious gems, to draw from. No hand can paint nor mortal powers produce such wonderful tints and colors as are furnished by the plumages of the many birds. The student taxidermist should study the secrets of color and artistic effects, and acquaint himself with the needs of a house, both useful and ornamental.

Study what is admissible and what is objectionable in the way of wall and floor ornaments and decorative furniture. Then, with some settled and comprehensive ideas in your mind, set out to produce something; have it entirely new if possible; do not be narrow-minded enough to confine yourself to simply copying the productions of others. Be large minded, and seek to produce something new and effective.

Bear in mind this one necessary conviction: Whatever you plan, plan to serve some positive purpose—a useful purpose. In fact, make everything to be decidedly valuable, either as a means of novel decoration or to be of some practical use. Combine all this with the beautiful, and you have hit upon a happy medium of success.

Do not make a piece to clutter up a house or to be awkward in handling or difficult to care for and preserve. As I understand it, decorative taxidermy implies just this: If an article of taxidermy is handsome, it is decorative in itself; and if it is designed to serve a useful purpose, as fire, window, hand, or lamp screens do, and the many handsome pieces intended for hall, library, and dining-room decoration that are made of the antlers and horns of Deer, Antelope, and Ox, it is decorative taxidermy.

It has the two principal features necessary to make them desirable whenever they are articles of use and articles of beauty. I might go on and enumerate scores of articles that would come under the head of decorative taxidermy. Some of them I will mention.

Medallions of the various birds adapted to the purpose; game panels; combinations of furniture, which include hall-racks, stools, easels, wall-pockets, &c., &c.; also, rugs, mats, fans, dusters, and pillows, are some of the principal articles manufactured.

In connection with the subject of care of articles of this kind, I wish to make a few statements, as it has a very important influence on the success of such articles.

There is a prevailing idea that feathers and hair are liable to the attacks of moths, dust, and other destroying agencies. I want to say for the benefit of those who are prejudiced against the objects that taxidermists deal in, that this is not entirely true. This opinion is erroneous to a great extent. My personal experience has been very different. I have been actively engaged in the profession of taxidermy for about fifteen years, and during that time I have mounted and prepared several thousand specimens, principally birds, both dried and fresh skins. Most of them have been for the cabinet, and I believe that out of this large number I have lost by the direct ravages of insect vermin not more than a dozen specimens.

What is the cause of this favorable result? Simply this, that I *properly* preserved my specimens with curatives. And I assert that if a specimen—be it either mammal or bird—is carefully and properly preserved, the experience of every careful taxidermist will present as good a result. Now, a word as to the objections generally raised by the skeptical. They say the poisons used are pernicious. This is not altogether true. First, poisons that throw off pernicious gases are always avoided when necessary and other equally efficient agents employed. Some taxidermists employ preservatives that would not hurt a mouse if a quantity was eaten. I do not intend to scoff at the honest opinions of honest people in relation to pernicious agencies being introduced into their homes.

I am myself a zealous disciple of hygienic laws, and would cast every objectionable agent from any threshold sooner than jeopardize the health of a home or community. I would rather live with five hundred specimens of natural history in my sleeping apartment sooner than indulge in some of the vicious customs of many of the most painstaking people. The pernicious effect resulting from the introduction of specimens of natural history into a house are nothing compared with the over-draped and highly decorated walls of thousands of the model homes that are held up for vacillating mortals to admire.

The poisons said to be employed in manufacturing many kinds of household forms of decoration, the injurious chemicals often resorted to, to produce the lovely colors of the female apparel, are more direct agents in poisoning the atmosphere surrounding one than most of these honest people dream of.

Many of the most beautiful pieces of decorative taxidermy are as free from poisons as are the soft luxuriant downy beds that many people indulge in so sumptuously. Everything of a destructible nature should be avoided. Selections should be made to further this end.

The field is broad enough to work in and avoid all material that is likely to perish. Every feather or hair can be preserved when necessary, and guaranteed to last a long time. Many say birds and the like are fragile material—this is not so—if they are strongly prepared, and made in such a way as to resist a moderate abuse, and if this is done they can be kept whole and in a smooth condition. And as for their requiring dusting—that *is* true—so does everything else, and that which is true of one thing is true of the other. Accidents and the ravages of time will injure all things in their turn.

All decorative pieces of taxidermy that are well made will resist all these so-called destructive agents, and with moderate care and judicious use they will outlast many other things that are freely admitted to be strong and resisting.

A few more moments are allotted me, and I will take up your attention by a brief reference to the pieces of decorative taxidermy that stand typical of the art at the present day. In our exhibition will be found various pieces of different degrees of excellence.

They are representative pieces as it were. And in commending them to your inspection I trust that the efforts to place them on exhibition here will meet with approbation only so far as they are justly entitled to it.

I feel safe in stating that the possibilities in this direction are fairly set before you in the character of these decorative pieces of taxidermy. In a few years we shall be better prepared to predict what standard decorative taxidermy will occupy; but that it will occupy an important position, and will exert a great influence in a progressive direction, is very certain.

And I would urge every aspiring and zealous student to push on in new channels, and endeavor to reach that degree of perfection that points onward to successive achievements, and which will surely establish a style of art that will win the support and admiration of the lovers of the beautiful.

COMMON FAULTS IN THE MOUNTING OF QUADRUPEDS.

BY WM. T. HORNADAY.

The task of the taxidermist, if properly appreciated, is a grave and serious one. It is not to depict the mere outline of an animal on paper or canvas and represent its covering of hair, feathers, or scales; nor is it to build up a figure in yielding clay and cast it in plaster. It is to impart to a shapeless skin the exact size, the form, the attitude, the look of *life*. It is to recreate the animal, or at least so much of it as appeals to the eye, to give it all that nature gave it, except the vital spark. It should be an exact copy, as if it were a cast of the animal as fashioned by nature's cunning hand. It must stand the crucial test of being viewed from all points—from the side, the front, from behind, above and below.

More than all this, the animal must be prepared to stand the test of time. It must not swerve from its poise; it must not shrink nor change its form; it must retain its smoothness, and resist the ravages of destroying insects.

To many people taxidermy "looks easy," so they say. Perhaps there are professional taxidermists also who find their tasks easy. If there are any such I pity them with all my heart. They do not appreciate the demands of their calling. There is the same difference between the form of my first deer and the form of a live deer of the same size that there is between a painted cow on a butcher's sign and one by Rosa Bonheur; and yet I had very little trouble in mounting my first deer, far less than I would have now with another of the same size. I looked upon it then and called it good. To-day, were it not my first large mammal, I would blush to own it.

If there is an intelligent person who believes that taxidermy is easy, or that it is not, when successfully prosecuted one of the most difficult of the fine arts, let him come to my work-room and I will point out where the difficulties lie. Bad taxidermy *is* easy, I grant, but we are not discussing stuffed monstrosities of any kind.

It is impossible for any one to give in one short paper general directions by which animals may be more correctly mounted than they now are. Each worker has his own methods, and it is not to be expected that these could be easily abandoned and others substituted. I care not what a man's methods may be so long as they produce proper results. But there are certain faults common to nearly all mounted animals, beasts, birds, reptiles, and fishes, which should be pointed out and avoided hereafter. Having studied one class of animals with particular interest and under circumstances very favorable to comparison of the inanimate with the animate forms, I consider it my duty to point out what I conceive to be common faults in the mounting of mammals.

It is somewhat difficult to classify them in the order of their importance; but it would be still more difficult to explain fully how each may be remedied without filling a small volume. To the active and progressive workers of the Society of American Taxidermists I believe it is only necessary to point out common faults and leave them to find their own remedies.

The most common and most serious fault with about ninety per cent. of all quadrupeds that pass through the hands of the taxidermist is that they are stuffed too full. This is quite as true of European as American work; and if we improve in this direction we will, to that extent at least, surpass the work of all other countries. It is easy to fill a skin too full; it is difficult—*very* difficult—to keep it down to its natural size and shape. The tendency of loose or fibrous filling is to distend the skin and make a smooth, round body. Nearly all large mammals that are filled with straw or excelsior have a bloated or swelled-out appearance, often painful to contemplate and often ludicrous in the extreme. The tendency of every amateur is to fill a skin as full as possible and as fast as possible. Habits of this kind when once formed are not easily abandoned. To this vicious habit of stuffing full is due the fact that not one small stuffed animal out of every ten, and not more than one large one out of every fifty, have that graceful likeness of form so characteristic of the living creature. The bodies of most stuffed mammals are round, fat, or even bloated; the flanks are filled out instead of being drawn in; the legs are fat, thick, and round where they should be flat and thin; the eyes bulge out of their distended lids, and the cheeks and lips are full and puffed out unnaturally. In short, from tip of nose to tip of tail mammals are stuffed too full.

The body of a mammal is the most difficult part to shape. With large specimens, particularly those which have short hair or none at all, it is impossible to accomplish this part of the task successfully except by building a manikin of the proper size and form and putting the skin upon it. By covering a properly-shaped manikin with half an inch of clay, and modelling the skin down upon it, it is possible to secure the exact form and size of life. The African elephant—Mungo—now in the Exhibition is the result of this method, and the only thing to be urged against the process is the weight of the clay. On the other hand, I may urge the great gain in durability.

With small mammals it is possible to tan skins in a salt and alum bath, which contains an excess of alum, and to shrink and harden them up to a given point, so that in mounting them it will be possible to fill the bodies full and hard without stretching them beyond their natural size. The more alum used the less a skin will stretch. The proportions vary according to the size of the skin and its texture. Every taxidermist should experiment with the salt and alum bath until he knows precisely what strength is necessary in every case. It is impossible to fill a skin with soft filling and keep it down to the proper size unless it has been properly shrunken with alum when fresh. With skins which have once been dried the trouble is to sufficiently relax them.

The legs of stuffed mammals are almost invariably too round and thick, especially near the body. The thigh in particular is flat and broad—in some animals extremely so—and the joints are strongly marked.

An important feature of every mounted mammal is the eye, and it may be either attractive or repulsive according to the treatment it receives. It should be in the right position, neither too far back, forward, up, nor down; it should be of the right size, form, and color, and it should not burst out of the socket. I have seen in a museum a Virginia deer with *red* glass eyes and round pupils sticking out from the animal's head like huge angry tumors, hideous and repulsive. I have seen fish eyes used for a deer and brass buttons as eyes for a seal. It is a common thing to see buffalo, elk, moose, and deer with round-pupiled glass eyes, and hardly an imitation of the true color. At present the public has no faith whatever in the eyes of stuffed animals, and they should not have until taxidermists turn over a new leaf. No man should call himself a taxidermist if he does not strive by every means in his power to copy nature. An eye which is not the right size, shape, and color will *not* do for a stuffed animal, unless it is to be used as a scare-crow. It is an insult to the public to put in to the head of an animal glass eyes which are faulty in every respect, when it is easy to procure here in New York exactly what should be used. Glass eyes should be used with such care and study in selection that in the future the public will have faith in their color and shape, and regard them with an interest not felt at present.

A great many large mammals are mounted with supporting irons, which are inadequate to meet the strain which comes upon them. In some cases the iron rods are too light; in others the heavy rods are not fastened to the framework with sufficient firmness. The result is the same in both cases; the animal leans heavily to one side, and the fault cannot be remedied without completely remounting the specimen. There is one museum in the United States in which nearly every one of the deer, elk, buffalo, and moose lean very heavily to either one side or the other, and there is no remedy. Those specimens have been in that condition almost since the date of their mounting, and it may be several years before they can be replaced. They stand as a monument to the bad judgment of the taxidermists who are responsible for them, and who they are I am glad to say I do not know, neither do I wish to be informed.

Every animal that is mounted should be so solidly put together in every way that it will stand the test of time. The supports should be too firm rather than too weak. The filling should be so firm that it cannot shrink away from the skin in a few years and leave the animal a series of ridges and hollows, as sometimes happens. If the specimen is stuffed hard and smoothly and is firmly supported it will stand a century, and still look well.

The members of this Society have it in their power to develop an American school of taxidermy which shall in every point so completely surpass the highest development of the art in Europe as to be beyond all comparison. We may safely challenge the taxidermists of Europe to competition even now.

In painting and sculpture American art cannot as yet be compared with the European schools, but in taxidermy, *the new art*, we shall soon lead the world, if we cannot even now. If the museums of this country will give us the support we are striving to deserve at their hands, we will make their animal collections the most attractive in existence.

We alone cannot work a complete revolution in our art, however hard we may study and work and experiment. If those who are, or who should be our patrons, are willing to second our efforts, the future of the art in America is assured. If we are not to receive the substantial support which our work requires in order to survive and continue successfully, it will be in order to consider the advisability of abandoning the profession entirely.

NOTE ON THE VALUE OF ANIMAL ILLUSTRATIONS TO TAXIDERMISTS.

BY F. W. STAEBNER.

It would seem almost superfluous to insist on the value, nay, the absolute necessity of good illustrations as aids to the taxidermist, were it not that the importance of the subject appears to be hardly yet fully appreciated by many of the very ones to be most benefited.

There was a time, now happily past, as the work exhibited by this association abundantly proves, when individuals who mounted "birds and animals" (as their cards set forth) were content to ram a hide full of packing material, sew it up, and call the effigy by this or that name according as *this* or *that* animal was desired. The degree of monstrosity, if it may be so termed, thus produced was in inverse ratio to the care of the workman for his art and his knowledge (often scant enough) of the external appearance of the animal he was attempting to reproduce. These monstrosities of taxidermy are still to be seen in many of our public museums where, let us hope, they at least serve the purpose of teaching the younger generation how not to do it.

As in all other departments of human activity, so in this is the skilled workman plainly superseding the unskilled, and the class of work thus becoming more and more a source of pride and satisfaction. The man with a love for his art, necessarily something of a naturalist and with a naturalist's care anxious about the correctness of all the details of his work, must utilize all the aids at his command, and of these aids accurate drawings and paintings occupy the chief place. These are the taxidermist's works of reference to which he goes for information precisely as another goes to his encyclopædia, since the ability is given to no man to carry all the minute points of an animal's external appearance in his mind. That the representations for this purpose should be what are strictly understood as works of art is obviously unnecessary. The objects to be secured, however, and which they should possess to meet the requirements of the case are: 1, accuracy of outline; 2, truthfulness of attitude; and 3, in order of importance, correctness of coloring, and in so far as they conform to these things are they already, by just so much, works of art. What is technically known as artistic effect should here be a secondary consideration. Having secured the first three essential points, attention may be given to the last.

In the case of rare animals such representations, as is well known, are the sole reliance of the taxidermist. That they have a value even in the case of more familiar animals may be instanced by the case of the Walrus. The pictures of this mammal in all the professed works on zoology and natural history—even in so good and generally correct a work as Brehm—are glaringly false, and it is only within the last few years that anything approaching truthful representations—figures drawn from observation instead of copies of previous drawings originally evolved from the artist's "inner consciousness"—have been given us, and so it happens that of mounted specimens of the walrus showing the true appearance of the animal almost the only ones at the present time are the one at Cambridge, and that other at the United States National Museum mounted by Mr. Hornaday.

How often has a painstaking taxidermist wished for a means of refreshing his recollection on some little matter of detail concerning a creature's anatomy, and been obliged to finally guess at it because of the lack of adequate illustrations. Let me not be understood as decrying the assistance afforded by zoological gardens. It is just here that they come into play, and as it is better for the taxidermist to observe at first hand so these are even better than drawings for reference; but the fact is they are far from being readily accessible, at least in this country, and in the few instances in which this objection does not apply, the variety of specimens which they contain is too limited, so that we are still compelled to supplement them by a more ready source of information, and thus we fall back upon pictorial representations as on the whole most convenient. As above implied, however, these representations must be taken from life by skilful hands, and must give us the animals as they look and not as the artist thinks they ought to look.

But in order that we may have such we must encourage those who work in this line—the Landseers, the Baryes, the Wolfs, the Spechts, &c., whom, under a change of name, we have in this country in the Beards, the Kemeyses, &c. We must make it profitable for them to undertake the work we so much need, and if we have the good of taxidermy at heart, if we have faith in its capabilities as an art we will do this, for in so doing we are helping *it* and ourselves, as well as them.

ON THE MOUNTING OF CRUSTACEANS.

BY FREDERIC A. LUCAS.

The mounting of crabs, lobsters, and other crustaceans is somewhat of a thankless task, requiring an outlay of considerable time and trouble to arrive at results at all satisfactory. At first sight it would seem an easy matter to mount an animal whose form is determined beforehand, but a little trial develops the fact that, like bringing up children, it is much easier in theory than in practice. As crustaceans dry they become very brittle, and the small legs and delicate feelers break only too readily. Worse than all, the beautiful colors with which these creatures are adorned while living fade rapidly, and the only way in which they can be renewed is by a dextrous use of paint. Therefore, the great requisites for mounting crustaceans are a careful touch, a good eye for colors, and some knowledge of the proper methods of applying them. The preparation of crustaceans is a little peculiar, inasmuch as, instead of the skin being removed from the body, the body is removed piecemeal from the skin. The first step in this process is to detach the carapace or covering of the back, and this, in many crabs, is a work of considerable time and patience. Commence by inserting a knife-blade—an ordinary table-knife is good—at the junction of the body with the tail and work it carefully around the hinder portion of the shell until it is detached. Now pry up the back portion of the shell, cutting away the attachments as fast as they can be reached, and the carapace will soon come away from the body, leaving the modified legs that surround the mouth attached to the body. To scrape the flesh from the carapace and exposed portions of the body is an easy matter, and it is only needful to exercise a little care not to scrape through the upper joints of the legs. To clean the legs it will be necessary to make some small hooked scrapers by flattening, sharpening, and bending one end of a piece of annealed wire sufficiently long to run the entire length of the leg. These scrapers are inserted in openings made between the joints of each leg and the meat drawn out, an operation much more quickly described than performed. Usually it is most convenient to make the openings on the upper side of the leg, as it is a very simple matter to close them with a little glue and cotton in the manner hereafter described. After carefully scraping the interior of each leg, wash thoroughly with a syringe to finish the work of cleansing. As crustaceans are particularly liable to the attacks of dermestes, they should be carefully poisoned, either by a liberal application of thin arsenical soap, or, better still, by soaking for two or three hours in a bath made by dissolving arsenic in hot water. If the soap is used, see that it is worked well into the legs, as well as every nook and cranny of the body, by means of a small brush. The method of wiring varies a little according to the desired position of the finished piece, but, owing to the nature of the subject, but little variety of attitude is possible The best wire to use is zinc, as it never stains by rusting, but, unfortunately it is, so far as I know, impossible to procure zinc wire in this country except by special importation, and iron wire must ordinarily be made to answer. It is well to wrap iron wire thinly with tow. If the animal is to be walking with the body clear from the ground the wire must be passed through the tips of the claws, and in many species which, like the common blue crab, have sharply-pointed claws, it will be necessary to remove a little of the tip in order to render this operation possible. Ordinarily it will be quite sufficient to support the animal on four legs, thus leaving the others intact. The wires for the large claws must be carefully worked to the very tip, and not infrequently these claws are so heavy that they must be allowed to rest on the pedestal. The leg-wires should be so long that the free inner end can reach from the opening of the leg to the opposite side of the body, so that the leg-wires cross one another. Bend the ends into hooks, place a little tow between the wires and the shell, and fill the openings of the leg-joints with cotton. Place the animal in a walking attitude on the temporary pedestal, supporting the body by a block of wood just as thick as the height that you wish to have it from the ground. Bear in mind that the third pair of legs keeps step with the first, and the fourth with the second, and that they do not sprawl away from the body, but keep pretty close to it. Therefore, what may by courtesy be called the knee-joint, should be bent at a pretty sharp angle. All this being done, pour in a little thin plaster of paris, and thus unite the wires in a solid mass. Do not meddle with the specimen until the plaster has thoroughly set. When it has, put the carapace in place, adjusting it carefully over the legs, and tie it firmly on, lest it should warp in drying; also, pin out the eyes and arrange the feelers. In case the specimen is to be resting on its pedestal it will be unnecessary to run the wire *through* the legs, and quite slender wires may then be used, since their only purpose will be to keep the legs in place and render it impossible for them to fall off should they become disjointed. The animal is held in place by means of a wire bent into the shape of a wide U, one end of which is run through the front portion of the body and the other through the hinder part, the middle of the U passing over all the leg-wires and holding them securely in place. Lobsters are usually placed flat on their pedestals, and the fastening wire is run through the entire length of the tail and brought out at the tip of it. For museum or other purposes it is often desirable to study all sides of a specimen, and in such cases the mode of procedure is as follows: Shape a piece of wood so that it will fit loosely in the body cavity and attach it securely to a rod of sufficient size to firmly support the finished piece. This rod is variously placed according to the position in which it is wished to have the finished specimen.

In the case of crabs it is desirable to have them "stand on end," and the rod may be brought out at the rear of the body, while in lobsters it may be brought out through the center of the thorax. The legs having been wired, this piece of wood is introduced, the legs fastened to it, and plaster poured around it to form a firm attachment. First, however, place fibers of tow or pieces of twine over the wood and poke them down into the space between it and the sides of the body. Of course in a lobster thus mounted the tail-wire would need to be of some considerable size, and it is well in such a case to use a tow wire for additional security. When the specimen is quite dry glue on the carapace and fill the holes between the joints of the legs with finely-cut cotton and thin glue. First, put a little cotton into the hole, smear it over with glue, and apply cut cotton and glue until the gap is completely filled. Le Page's fish-glue, used thin, or his mucilage, is excellent for this work. In painting crustaceans, first give them a thin coat of sugar of lead, which fills the pores and prevents the color from striking in and thus looking dead in spots. When dry, paint with turpentine color, the main point being to stipple over with a soft brush. This should be done very carefully, as otherwise it is almost impossible to avoid giving a streaked appearance to the animal. Crustaceans may be mounted either on plain pedestals or on artificial rockwork, according to the purpose they are to serve, and in any case they should be kept out of the dust so far as possible, since, owing to their fragile nature, they are very difficult to clean.

HOW TO CLEAN SOILED BIRD SKINS.

BY FREDERIC S. WEBSTER.

It is only until recently that the cleaning of birds' feathers has become a general practice.

I can recall the time when not even an attempt was made to remove stains caused by fatty matter and dust accumulations.

In fact, if a specimen was slightly soiled, it was allowed to pass unnoticed; and if badly discolored, the specimen was considered more or less worthless, according to its variety.

The greater part of the valuable collections of our museums, prepared in earlier times, are now most unsightly objects on this account, and certainly are worthy the pity of the taxidermist of the present day.

This condition of things can easily be avoided in the collections of the future if care and labor are bestowed in the preparation of museum material.

I have often been surprised by taxidermists, of standing and experience, asking me the question: "How do you manage to clean your specimens so effectually?" "How do you make them so white?" "I do not have such luck with mine." There is no secret about it nor any luck.

It is accomplished in a very simple manner and with very little difficulty when once understood; so to those who may not know, I will give the benefit of my experience. I have tried various methods, and I am convinced that there is but one way to effectually obtain the desired result, and always secure a good, clean, and white specimen, and one that will remain so for many years.

All birds naturally arrange themselves into two classes: 1st, Old and thoroughly dry skins; 2d, New or fresh skins. In both classes you have large and small, old and young, black and white, all more or less discolored by the grease coming out of the shot-holes and the openings in the skin. Grease, when exposed to the air, soon changes color, and becomes a rusty yellow; and when allowed to remain for a long time, so thoroughly saturates the skin and feathers that it is with the greatest difficulty such stains are removed, and often it is impossible to entirely do so.

When the skin is first taken from the bird is the time to remove the cause of the evil, before the fatty matter has changed color and penetrated every quill, and finally found its way along every feather.

If this precaution is taken in the outset, nearly all the oil can be extracted from the skin.

While skinning the bird plenty of boxwood sawdust, cornmeal, or plaster of paris should be freely put on the skin, and when filled with oil should be removed and more clean material used. By scraping the skin thoroughly, and using plenty of plaster or meal, almost the whole of the grease can be removed.

By this time the feathers have become more or less soiled, and require a treatment similar to that applied to the feathers of a relaxed skin, which have become soiled and yellow by age and grease.

We will now suppose that we have an old skin of a duck of some kind, a snipe, a heron, or any water-bird, all of which are generally very fat, especially the former.

Assuming that it has been relaxed and the skin thoroughly scraped of all the loose, fatty matter, supply yourself with a large, shallow box, say three feet square, and furnished with a lid. In this box have a quantity of plaster, about six quarts, as it can be used many times.

This will figure in the paraphernalia of the taxidermist as a "plaster-box," which is an indispensable article in a well-equipped establishment devoted to the preparation of birds. A generous supply of spirits of turpentine is also necessary if one desires to be very economical. Naptha or benzine can be used, but the former is by all odds the best in most cases.

Now we are ready for at least a good two hours' work on a greasy duck, say a scoter or canvas-back. With a soft sponge or wads of cotton, saturated with turpentine, carefully apply to the feathers in every part, great care being required not to separate the web of the feather. Pass over the feathers often, pushing them aside, when necessary, so as to get at the base or root of the feathers. Rub always with the grain; apply pressure when necessary; discard the wads of cotton when they become soiled and filled with grease, and replace with clean ones. Pursue this course until you are satisfied that all the stains are removed, and the loose, greasy substances have been cut or dissolved by the turpentine. You will now have accomplished the greater part of the undertaking.

The next step necessary is to spread the bird out in the plaster-box and cover every part of the bird; let it rest then until the plaster has absorbed the turpentine, mixed with the grease. Give it a few sharp shakes; cover again with more clean plaster, gently tapping with a slender rattan or stick the different parts of the bird. Then take it out, shake, cover it again, and manipulate as before until the feathers become fluffy and assume their original shape and airiness. Place the bird in the box and allow it to remain fifteen or twenty minutes; then take it out when there is a current of air and give it a good, long beating and brushing with a "bird's wing-brush," and broad, soft camel's hair brush.

The success of the specimen depends now upon the care given in brushing and beating. It will not do to break the quills or separate the web of the feathers during the operation, or the specimen will look rough and ragged.

The specimen must be thoroughly dry in order to remove all the particles of paste. It will tax the perseverance and patience of the operator to remove all of it, so that it will not sift out all over the pedestal when the specimen is thoroughly dry.

If any plaster is allowed to remain in a bird, which has black or dark plumage, it will make it look badly. It is not the grease altogether that disfigures a black specimen; it is the accumulation of dust which mixes with the oil, and forms a gummy substance on the plumage.

It is more difficult to remove stains from white birds, but it can be successfully accomplished, if they have not been allowed to remain too long. They have, however, the advantage over black plumaged birds, in showing less signs of the presence of plaster after being cleaned.

If the plumage seems to persistently hold the plaster this indicates plainly that the grease has not all been cut; so apply more turpentine, then plaster, and thoroughly shake and beat as before. Often I have been compelled to returpentine and replaster a bird *three* times before all signs of grease were satisfactorily removed.

During very warm and dry weather all birds clean much easier than in moist and rainy weather. If I have many specimens to mount that require cleaning, which often happens when any taxidermist is mounting water-birds, I hail with pleasure a dry, warm day, and if a good stiff wind is blowing, that will carry away the clouds of plaster that arise from the bird when first beaten, the pleasure is increased.

At no time is the task of cleaning a bird a pleasant one. When the specimen is small it is not so exasperating, but when the specimen happens to be a swan, with its great, dense mass of downy feathers, and they are so greasy and dirty that it will require a quart of turpentine and a peck of plaster, the work necessary to make it clean and white is very great, and what is a swan if not pure and white?

Before using the turpentine it is well to moisten the feathers with a sponge dipped in water, as then the turpentine seems to be more efficacious. Under no circumstances use water without afterwards using turpentine, for without it the plaster will harden quickly, and it will be quite impossible to remove it, and further than this, the feathers are likely to have a stringy appearance when dry.

Now, we must speak of blood stains. This is a thorn in the side of every taxidermist that is not easily removed. It is quite impossible to do away with these stains in some cases. Water has not the slightest effect upon blood. I have taken a hardened or clotted piece of blood, the size of a grain of wheat, and endeavored to dissolve it in water without effect. Sugar added to water is said to remove these stains if not too strongly set; I have tried it, but with poor success. If the specimen is valuable and badly disfigured by blood stains, I usually pull out the stained feathers, and replace with others taken from the same bird. By this method both time and bird are saved. Glycerine sometimes acts upon the stains, and by afterwards soaking in water for some time they can be removed.

The results in this direction are generally unsatisfactory at best. Future experiments will be desirable. If the blood is washed off inside of forty-eight hours after the specimens are killed, the stains are not resistant. Ten or fifteen minutes' work, however, when the specimen is first killed, will often save two hours' hard work later.

Experience and practice will teach a novice how much hard treatment a specimen will stand. If the feathers are inclined to come out, before the specimen is ready to turpentine and plaster, it may be advisable to mount the bird, and allow it to partly dry before cleaning, and, if very bad, it is best to mount the bird and let it thoroughly dry, and then clean; but this course is necessary only in extreme cases, and they do not often occur.

This treatment of birds is one I have constantly used for a number of years, and I can heartily recommend it as the simplest and best known to me, and one that will give complete satisfaction.

HOW TO MAKE A GOOD BIRD SKIN.

BY S. F. RATHBUN.

With a little care it is just as easy to make a good bird skin as a poor one. Most poor skins are made more through carelessness alone than almost anything else. Of course during the collecting season when the birds are passing through and one must, in order to get a good stock of them, work rapidly, the skins will not average quite as well in make as when there is less to do ; but with a proper amount of carefulness and painstaking, at the end of the season you may have on hand as good a lot of skins as one might wish for, and the satisfaction a person gets from looking over a lot of fine skins more than pays for the little extra care taken to achieve this end.

Let us now look and see what *few points* it is necessary to know in order to do good work. Taking a small bird for instance; after the process of removing the skin in the usual manner, which it is not necessary to repeat here, and having properly prepared the head by removing the brain and eyes, fill the eye-sockets with cotton, dust with the preservative, and reverse the skin as far as the neck. Having skinned the wing bones—and I always leave both bones of the wing if possible—dust with preservative and reverse the skin.

Now, see that around the head and neck it is smooth and neat. Partially pull out the wads of cotton in the eye-sockets and make a well-formed eye.

Having attended to these minor details, we now have the skin laying on its back and ready for putting *into shape*, which is the trick so hard to get.

Next, take a piece of cotton and roll between the hands until it attains the shape of a lead pencil and is about the size of the bird's neck. Taking one end in the tweezers run it up the neck of the skin until it protrudes from the mouth, and the other from the incision made in the skin. Now, with the tweezers take hold of the end of each wing bone and pull them down until the second joint of the wing appears, and the two lay parallel to each other. This places the wings in a natural position. A piece of cotton, rolled into a ball about the size and shape of the body removed, is next inserted in the skin beneath the longer piece that serves for a neck. Now, take a stitch and bring the two edges of the incision together.

The wings probably may have been slightly disarranged, so a little manipulation is all that is required to put them in their proper shape. By pulling on the cotton protruding from the mouth the length of the neck may be regulated, and when satisfactory cut off the end close to and tie the bill. Now, smooth all the feathers of the bird and label.

For making a first-class skin I think that drying in a sheet of thin cotton is the best. The edges of the cotton may be brought together and pinned. This allows you to give a good form to the skin, and the wings may be nicely fixed before pinning the cotton. When making many skins, the paper cone may be used to good advantage; but care must be taken not to make it too small, or the skin will be long and slender, and the feathers very closely pressed together, which is not good, provided you ever wish to mount the bird.

The cone should be large enough for the specimen to lay loosely therein, with no pressure on its breast.

In making up large birds, such as ducks, hawks, &c., it is better not to skin the wing beyond the first joint, but open on the underside and remove the flesh, then apply the preservative and sew up. By this means the quills preserve their natural position, and the wings shut up as in nature.

I think generally it is well to make up large skins in cotton, but oftentimes stiff wrapping paper is a good substitute, provided a thin layer of cotton is first placed upon it; then lay the bird thereon and pin the edges of the paper together. It is well to watch large skins when drying and see that the skin is properly shaped, and that the wings lay neatly, otherwise if neglected they often dry partially out of shape, and the skin proves but an indifferent one, whereas it may have been neatly made.

Outside of a few points in making up a skin, which, of course, it is necessary to know in order to do good work, carefulness during almost the whole process, and especially after the bird is skinned, is almost the only advice that can be given, and if closely followed will be sure to give good results. Do not be in too much of a hurry, and I might say neither be too slow, for the latter is unnecessary; and, after a little practice, good work can be done rapidly to a certain extent, and the results will more than pay for the pains taken during the operation.

ON THE MOUNTING OF TURTLES.

BY FREDERIC A. LUCAS.

In presenting this paper on the mounting of turtles, I must at the outset state that I lay no claim to originality, my sole credit, if credit it be, lying in the selection and combination of the best points in a number of processes.

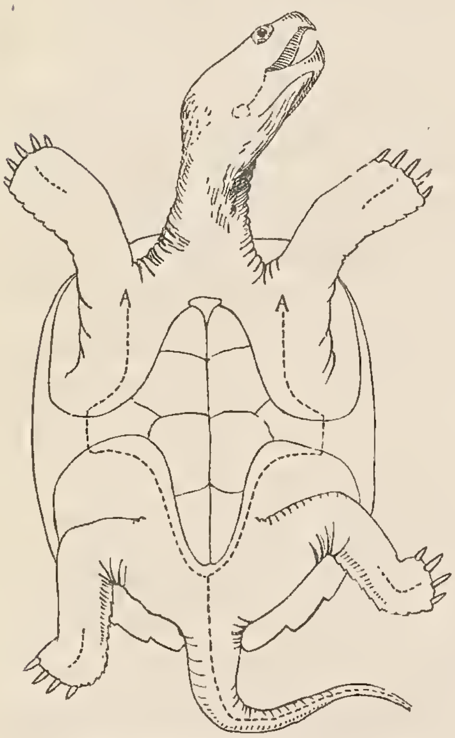
For general principles in this, as in all other branches of taxidermy, I am indebted to my friend Mr. Bailly, for the methods of skinning tortoises to Mr. Webster, and for the use of clay to Mr. Hornaday.

For skinning purposes* turtles may like Gaul be divided into three groups. First, the sea-turtles, having a moderate sized lower shell or plastron, feet in the form of paddles, and legs, which like the short neck, are practically non-retractile; second, those which, like the snapping turtle, have a small plastron and neck and legs largely retractile; and, lastly, turtles with a large under shield, and the power to draw the neck and legs quite under cover. This third group comprises the large majority of turtles, and unfortunately those most difficult to skin. A word as to the killing of turtles. "I am told"—but have never tried it—that a short immersion in warm water is fatal, and sincerely hope it may be so, as these reptiles are ordinarily very tenacious of life. Cyanide of potassium, so deadly to animals more highly organized, acts very slowly, and although the spinal column becomes paralyzed in a few hours, the limbs move at the expiration of a day and a half. Chloroform, however, appears to kill rapidly and easily, and it is only necessary to saturate a wad of cotton with the liquid, tie it over the animal's nose when he draws in his head, and leave for half an hour or so. In the absence of chloroform and warm water there remains only the barbarous but rapid plan of sawing through the shell into the heart.

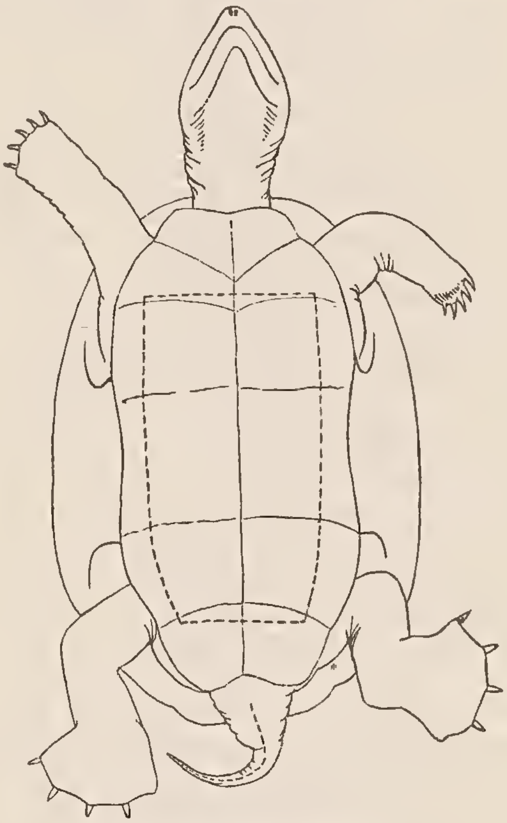
---

* That portion of this article relative to the skinning of turtles originally appeared in a condensed form in Ward's Nat. Science Bulletin, and I am indebted to Prof. Ward for the use of the accompanying diagrams.

The dotted lines in these diagrams indicate where cuts should be made in skinning.



A.—Snapping Turtle and Sea-Turtle.



B.—Tortoises and Terrapins.

To skin a turtle with any degree of comfort it is absolutely necessary to have a small saw. If wealthy, and addicted to the collection of good tools, buy a small dissecting saw, which costs twice as much as it should. A very good substitute can be made by breaking three or four inches off a hack saw and fitting it to a wooden handle, drawing the temper at one end to punch holes for the rivets. A pair of bone forceps may be a luxury, but they will be found a great convenience in detaching the neck and legs, and are wonderfully handy in skinning large birds and small mammals. In skinning a sea-turtle saw through the under shell on either side, and with a knife continue the cut clear around the hinder portion of it. Leave sufficient skin attached to the border of the plastron to enable you to readily sew the edges of the cut together when the specimen is mounted. Continue the cuts towards the shoulder far enough to allow the plastron to be turned forward, thus exposing the interior of the body. Make a cut under each flipper and the last half of the tail. Disjoint and skin the legs, removing by the cut on the underside what flesh cannot be readily reached from within, and working as far towards the end of the flipper as is possible. Leave all the leg bones attached to the flippers. With bone forceps or an old chisel separate the pelvis or hip bone from the upper shell and skin out the tail. Sever the neck from the body, skin to base of skull, disjoint the neck bones and remove the brain. Scrape away as much flesh as possible from the back of the skull. Unlike most other animals, the eyes of turtles must always be removed from the outside, care being taken not to cut the eyelids. Be sure to remove the small muscle from the outer hind portion of the jaw; otherwise it shrinks in drying, and creates an unsightly depression. Snapping turtles, and others with small under shells are skinned in the same manner as sea-turtles. It is not *positively* necessary to make a cut under the foot of these, but it will be found to greatly facilitate turning the legs and the manipulation of the clay during the process of mounting.

Tortoises and other turtles, whose legs can be withdrawn under the plastron, cannot be properly skinned by the method just described, owing to the impossibility of sewing up a cut along the hinder edge of the under shell. True, they often *are* thus skinned and mounted with the edges of the skin simply tucked in, but the result is unsightly, and the only gain is in time of preparation. Turtles of the last class should be skinned through an opening made by removing as large a section of the under shell as is practicable, drawing out the legs to their full extent to lessen the danger of cutting through the skin. The process of skinning is a somewhat difficult one, but the absence of unsightly seams after the animal is mounted amply repays the trouble.

The smaller turtles may be mounted immediately after skinning, but all preferably, and the large ones invariably, should be soaked for a few days in the usual bath of salt and alum. Always poison thoroughly, especially around the feet and back of head.

As the skinning of a sea-turtle has been first described, it is consequently in order to proceed with the mounting. It must be borne in mind that the skin of turtles shrinks considerably in drying, and the sewing should therefore be done very solidly; also all wrinkles should be somewhat exaggerated, as they disappear in drying. Therefore a turtle *must not* be filled out, but the skin should be left loose and the apparent excess will vanish.

The main principles in mounting large turtles are similar to those in mounting mammals, except that as sea-turtles lie flat on the ground much lighter wires may be used. First, make the tail, by winding coarse tow on an iron rod until it has the same shape but not quite the size of the original. Now cover this with clay, prepared according to Mr. Hornaday's directions, by mixing with soft clay a quantity of finely-chopped tow. Lay it in the skin and sew up, beginning at the tip of the tail and working towards the body, adding or subtracting clay here and there as occasion may require. Form in a general way the larger folds or wrinkles of the skin, leaving the finer markings until the animal is on its pedestal. Always decide the position of the finished piece before commencing work, and bend all your irons and shape the legs, neck, and tail with that predetermined form in view. Remember that turtles swim and walk with the same movements as do most animals—the right fore and left hind leg moving together.

The tail being finished, proceed with the hind legs, making so far as possible the same bends in the wires that are to be in the joints of the leg when finished, and tying the wire securely to the bones. Wrap the legs with coarse tow, taking care not to get the lower part too round. But little pains need be taken with the upper part of the leg, as it is concealed within the body, and most of the lower portion, as well as the "paddle," will need to be made with clay in order to insure a proper degree of flatness. If the animal is sufficiently small the three hinder wires may be fastened together, as follows: Place the knees and tail in their proper position—the animal lying, of course, on its back—and form a ring in the tail-wire just where the leg-wires cross. Through this pass the leg-wires and twist all firmly together, so that there shall be no "wobbling." If the specimen is large, the wires must be fastened to a piece of wood running lengthwise the body, as in a large mammal. Secure the tail-wire with staples, and bore holes for the leg-wires through which they are passed, adjusted to the proper length, bent down against the board and secured with staples. It will next be necessary to fill in from the base of the tail to the legs. This can be done with chopped tow after having first placed a good coat of clay on the skin in which to model the wrinkles. Now proceed with the neck and front paddles. Run the neck rod into the brain cavity and fasten it there securely, either by tying or by bending it down through the roof of the mouth, and turning it backward. It can be run out through the mouth, but this plan is not so solid as the above. The neck and front flippers are made and fastened in a similar manner to the tail and hind flippers.

Secure the cut edges of the plastron together with wires, and in sewing the skin use strong thread, and pull the edges tightly together, in order that the shrinkage in drying may not cause an unsightly gap. In *very* large turtles it is sometimes necessary, in addition to the leg-wires, to run a bolt through the plastron into the wood, to which the leg-rods are fastened. After the specimen has been placed on its temporary pedestal go over it carefully, marking in the wrinkles and working out the prominences, and, if needful, adding, by way of the mouth, clay and tow to complete the throat.

In mounting small turtles the wires of each end are secured as follows: Having made the tail and hind legs, bend an eye in the tail wire, opposite the inner ends of the legs, pass the leg-wires through this, and twist all firmly together. Fasten the neck and front legs in a similar manner, and twist the wires of both ends firmly together, so that the united wires form a sort of backbone.

In making the legs of small turtles be sure that they are *flattened* instead of round, and before skinning note well their shape. Fasten the leg-wire solidly to the bone, and wrap firmly and smoothly around with tow, forming a leg much smaller than the finished one will be. All the vacancy is to be supplied with the clay and tow mixture, which can be modelled into shape from the outside. It will be remembered that in the beginning it was noted that it would greatly facilitate the mounting to make a cut along the foot and under the lower part of the leg. Through this cut superfluous clay can be removed or additional clay introduced; and it is a very easy matter to sew up this cut in such a manner as to render it practically invisible. The manipulation of clay will be found at first somewhat aggravating, as it will persist in going where it is *not* wanted rather than where it is; but without the use of such a material it is practically impossible to correctly mount a turtle. The neck-wire of turtles can be fastened to the head by running it into the occiput and down through the base of the skull, and then twisting it upon itself. Be careful to get enough clay on the upper, back portion of the skull to properly supply the great temporal muscles, as any deficiency there will create a very ugly, shrunken appearance. Modelling the neck and its junction with the fore legs is the most difficult part in mounting, and unfortunately no directions can be given which will insure success. The main thing, after the mechanical part of the work has been mastered, is to study well the form of the living and dead animal, and to strive to reproduce that form *exactly*. "That is good enough," is a phrase I am sorry to say most of us use, for it is a very mischievous little sentence, and can usually be translated—that is *not* good enough. There is no royal road to good taxidermy, nor can it be done by machinery, nor by the use of unlimited tools. Tools are a great help, but they are *only* a help, and to do good work you must be careful, thoughtful, and observant. Without those requisites, although your work may be good enough, it will never be *good*. Occasionally in the making of groups, or in mounting specimens for museum purposes, it is needful to place a turtle in a swimming attitude. In such cases the work of procedure is the same as that previously described in the paper on mounting crustacea. A block of wood is fastened in the body to which all the wires are attached, and to this is secured a rod of sufficient size to bear the weight of the finished piece.

A word in regard to finishing. Sea-turtles, snapping turtles, and a few others, whose colors are dull, need only a coat of varnish, greatly thinned with turpentine, to render them fresh looking. It is, of course, understood that you have thoroughly washed the specimen. But all turtles marked with bright colors will need to be painted, and this must be done with thin color, often stippled over to avoid a streaked appearance. Large cracks and broken scales can be repaired with papier mache; small ones—such as seams, &c.—with colored wax. White wax can be colored by melting it and stirring in a little tube-color; use hot. Of course particular cases will often require particular modes of treatment; but once the general principles are thoroughly mastered these can be readily met.

STRUGGLES OF AN AMATEUR TAXIDERMIST.

BY PROF. J. W. P. JENKS.

Almost unconsciously to myself, I found, while enjoying a very brief course of lectures in natural history in my junior year in college in 1837, a hitherto unrecognized taste developing itself in my mental composition. Located a year later in a frontier village of mostly log cabins in the recent Lower Creek Indian Reservations of southwest Georgia as a teacher in a log schoolhouse, from the shutters of which I not unfrequently observed wild deer and turkeys feeding in the pine stretches surrounding, my incipient taste for the study of animate nature began to clamor for gratification; and with no knowledge whatever of taxidermy, beyond the sight of a few stuffed specimens in Peale's Museum in New York, and with no written or oral instruction, I commenced skinning birds according to my own fancy, and, by means of arsenic only, preserving the skins, till I had accumulated some fifty specimens, more or less. My methods of skinning were original, and later knowledge of taxidermical *modus operandi* convinces me that my specimens could never have been mounted, so that my first grief at losing all my specimens by the sinking of the stage in the Ocmulgee during a freshet, while I was in transit for the North, was subsequently greatly assuaged. Crude as they were, however, they served me for illustration in many a side talk with my pupils as a reward to them for good behavior and faithful study in the dry details of the three Rs. It was the basis of my discipline, and doubtless saved me the unhappy experience of my predecessor, who was driven out of the same school-room by one of my own pupils with a cocked pistol at his head.

Four years later found me installed as principal of an academy in southeastern Massachusetts. As my school increased in patronage from the small beginning of a dozen pupils, and the abstract sciences were permanently established, my thirst for imparting to my pupils information in natural history returned. But as there were no academical text-books upon the subject forty years ago I was compelled to adopt the lecture system, and, instead of illustrating cuts, bring before my class natural specimens fresh from the fields. The utter impossibility of furnishing even for a weekly lecture a sufficient variety, to say nothing of the expense and harassing disappointment of an unsuccessful hunt, convinced me, ere I had closed my first course, that I must have a permanent museum, that would avail me year after year. Calling upon Mr. Mann, the veteran taxidermist of Boston, he would do nothing for me unless I paid him $50 to begin with, and then but two hours instruction per day would he promise. Having but five days of vacation at my disposal I declined his offer, and ransacked the bookstores of Boston for some work on taxidermy. I could find none in English, but at Burnham's antiquarian bookstore on Cornhill I found one in French, which I purchased, and for a few months endeavored to make of some advantage. But experience soon taught me that either I was very unskilful or the art of taxidermy is not to be learned from books. Through the kind advice of Dr. Augustus A. Gould, the distinguished conchologist, and with a letter of introduction from him, I sought instruction of Mr. Ogden, the accomplished taxidermist alluded to in the address of Dr. Holder. As a special favor, and because of my endorsers, he agreed to give me instruction successive afternoons for three hours at $5 a sitting—payment at the close of each sitting. To these terms I readily acceded, and at the close of the fifth sitting my instructor was honest enough to say: "I can give you no more instruction in general with profit to yourself. Put in practice what I have shown you, and whenever you visit the city call at my laboratory, and I will help you out of special difficulties gratis, as experience shall make you sensible of them ; and when you shall have mounted one hundred birds you will throw away ninety-nine of them, keeping the first bird you ever mounted without assistance, and then begin to preserve your work." Suffice it to say, an experience of forty years and more since that time has verified his prediction.

Beginning with such specimens of mammals, birds, reptiles, and fishes as the near vicinity of my school-room brought within range of my gun, and with the pressure upon me of the charge of an unfunded institution, averaging during those years more than two hundred pupils, at an average age of eighteen years, I spent all my leisure time, both day and night, in the field and in my laboratory till I had well nigh exhausted the locality, with the result of furnishing my lecture-room, within twelve years, with several hundred mounted specimens, to my own and my pupils' great satisfaction. The following extract from Prof. Louis Agassiz' great work, " Contributions to the Natural History of the United States," Vol. II, 1857, p. 494, will perhaps be of some instruction and encouragement to young amateurs and teachers.

" It is a great mistake," he says, " to suppose that large museums are necessary for the study of natural history, and that show specimens from distant countries add much to the interest of a scientific collection. I deliberately assert that there is not a school-house in the United States, in the immediate vicinity of which it would not be easy to make, in a few years, a collection of native specimens sufficient to illustrate the fundamental principles of any branch of natural history. Nay, it is not too much to add that such collections would contribute greatly to the advancement of science, if simple catalogues of their contents were published from time to time. I am satisfied from my own experience that every such collection could, in less than ten years, be made worthy of a careful examination by even the most critical professional naturalists, and would afford to the teachers and pupils a source of ever new interest in their walks, and of ever increasing extension of their knowledge and ability to observe. In Massachusetts a very good beginning has already been made in several schools, and most successfully by Mr. J. W. P. Jenks, in Middleboro."

BIBLIOGRAPHY OF TAXIDERMY.

IN the Second Annual Report Mr. Lucas laid the nucleus of a Bibliography of Taxidermy. Other work pressing him this year, he delegated to me the task of preparing the second instalment.

In compiling the following lists I have included the title, or portion of title, of every book or shorter article on Taxidermy that I can find, or get reliable information of; but this, I hold, does not include works on embalming, skeletonizing, egg or insect collecting, &c.

Books that are written on Taxidermy or collecting, or devote any considerable space to these subjects, have the full title-page given, when obtainable, *verbatim.* But when the main object of the book is foreign to Taxidermy, and only a chapter or appendixal note is given to our art, the title of the chapter or note only is given, with enough of the book's title to allow identification; in a few uncertain cases I have given the book or article the benefit of the doubt.

In every case not otherwise so stated I have examined the book or article noted. Where this has been impracticable I have given the title as I found it, with the source from which I drew it, and, if possible, I have verified such titles by reference to other bibliographical authorities. I earnestly hope that any errors or omissions that may be noted by those who examine this list may be brought to my notice, so that a future instalment may be more complete.

For any degree of completeness which may be accorded this instalment of the Bibliography I am deeply indebted to the kind assistance of several of my friends: to the generosity of Dr. Elliott Coues, who gave me a number of titles that he had collected in connection with his Ornithological Bibliography; to the kindness of Mr. Charles Darwin, Librarian of the Geological Survey, for assistance in verifying titles; and to the courtesy of the Librarians of the Congressional Library, the Patent Office Library, and the Library of the National Museum, who have uniformly given me every facility for examining the books in their charge. Dr. Theo. Gill has also given me the benefit of his experience in zoölogical bibliography; and Mr. Oliver Davie, of Columbus, Ohio, kindly sent for my examination several of the rarer works on taxidermy, which I could otherwise not have seen.

L. M. McCORMICK,
U. S. National Museum, Washington, D. C.

INDEX OF AUTHORS.

Adams, A., 1854.
Altum, B., 1855, 1856.
Avis, R., 1870.
Baird, S. F., 1846, 1850, 1853, 1857, 1859.
Batizfavi, S., 1853.
Batty, J. H., 1873, 1875, 1880.
Bartholomael, 1815.
Belknap, J., 1814.
Bergling, 1861.
Bird, W. F. W., 1849.
Blakey, R., 1854.
Bocage, J. V. B., 1862.
Bock, 1857.
Boisduval, A., 1826.
Boitard, M., 1825, 1859, 1881.
Boitard, P., 1821, 1834, 1835, 1852.
Boswell, P., 1841.
Boucard, A., 1871.
Bouvier, A., 1879.
Brassart, J. G., 1827.
Brehm, A. E., 1811.
Brehm, C. L., 1827, 1828, 1842, 1861.
Breton, 1834.
Bronn, 1838.
Brown, M., 1878.
Brown, T., 1851, 1859, 1870, 1878, 1880.
Bullock, W., 1818.
Cabot, S., 1859.
Campiglio, S., 1837.
Capus, G., 1879, 1883.
Coal, W. E., 1837.
Collett, R., 1863.
Coues, E., 1874, 1879.
Coultes, H., 1877.
Cultur, 1795.
Danger, F. P., 1828.
Daudin, F. M., 1800.
Davie, O., 1882.
Davies, J. B., 1851, 1858, 1870.
Davies, T. A., 1771.
Dawson, G. A. R., 1880.
Dexter, N., 1874.
Donovan, E. O., 1794, 1797.
Duff, J., 1849.
Dufresne, L., 1803, 1819, 1820, 1823.
Duhamel, H. L., 1752.
Dupont, E., 1823, 1827.
E'Loffe, A., 1862.
Eger, L., 1876, 1882.
Eiben, C. E , 1882.
Evans, P., 1841.
Feddersen, A., 1878.
Forster, J. R., 1771.
Gardener, J., 1870.
Geire, J. D., 1689.
Gill, C. T., 1824.
Gérardin, M. S., 1806.
Gentil, P., 1830.

Graves, G., 1818.
Gronov, J. F., 1742.
Hallock, C., 1877.
Hammargren, T., 1859.
Harding, S., 1875.
Harting, J. E., 1871.
Haupt, H., 1845.
Held, A., 1845.
Henon, 1801.
Holder, J. B., 1878.
Holder, R. H., 1862.
Hornaday, W. T., 1874, 1877, 1881, 1882, 1883, 1884.
Housman, 1881.
Hume, A., 1874.
Jencks, F. T., 1883, 1884.
Jenks, J. W. P., 1877.
Junker, T. C., 1832.
Kaltbrunner, D., 1879.
King, H., 1840.
Kjaerbölling, N., 1875.
Kingsley, J. S., 1882.
Klener, G. A., 1832.
Koch, G., 1871, 1872.
Kuckhan, T. S., 1771.
Lecocq, H., 1826.
Lee, S. W., 1843.
Lemaire, 1884.
Le Roye, 1879.
Lesson, R. P., 1819, 1828, 1830.
Lettsom, J. C., 1774, 1795.
Lewen, F. R., 1844.
Lewis, E. J., 1854, 1855.
Löwe, J. C. C., 1783.
Lucas, F. A., 1881, 1882, 1883.
Manesse, Abbé, 1786.
Manton, W. P., 1876, 1882.
Martin, L. P., 1856, 1869, 1870, 1876.
Maruy, 1763.
Mauduyt, 1771, 1782.
Maunder, S., 1878.
Mouton Fontenille, J. P., 1801, 1811.
Mawe, J., 1821.
Maynard, C. J., 1873, 1877, 1883.
Meyer, J. C. F., 1775.
Murr, C. G. v., 1774.
Naumann, J. F., 1815, 1838.
Nicholas, P. F., 1801.
Opperman, 1835.
Pacins, G. F., 1774.
Patti, M. Z., 1853.
Pearson, J. T., 1835.
Peck, W. P., 1795.
Pinel, P., 1791, 1793.
Pistorius, G., 1799.
Prevost, F., 1863.
Reaumer, F., 1748.
Richter, H., 1833.
Richter, E. G., 1829.
Roux, P., 1825.
Schilling, 1861.
Schmidt, J. F., 1824.
Schmidt, C. H., 1818.
Schmeling, C., 1883.
Sinclair, J., 1824.
Stein, P. S., 1802.
Stetson, E. J., 1874.
Stevens, S., 1868.
Stradling, 1883.
Strenbel, 1845.
Suckow, 1830, 1832.
Swainson, W., 1808, 1824, 1840.
Sylvester, S. H., 1865, 1874.
Thompson, E. P., 1830.
Thon, C. G., 1827.
Trail, T. S., 1825.
Turgot, E. F., 1758, 1761.
Walchner, 1843.
Walker, C. A., 1869.
Waterton, C., 1825, 1830, 1839, 1870.
Ward, H. A., 1874.
Ward, R., 1882, 1884.
Webster, F. S., 1882.
Willich, C. M., 1843.
Wood, J. G., 1874.
Wood, S., 1877.
Woodbridge, W. C., 1831.
Zincke, G. G., 1802.
H., 1830.
A. Z., 1830.
Anon., 1788, 1818, 1820, 1827, 1834, 1860, 1877, 1880, 1884.

1689. GEIRE, [JOHANN DANIEL.] De vernice ad conservanda insecta et animalia. <*Miscell. Acad. Nat. Curios.*, Dec. 2, 1689, pp. 297, 298.

1742. GRONOV, JOH. FRIED. A method of preparing specimens of fish, by drying their skins. <*Philos. Trans.*, 1742, p. 57.

*1748. REAUMER, FERCHAULT DE. Divers means for preserving from corruption dead birds intended to be sent to remote countries, so that they may arrive there in good condition. Some of the same means may be employed for preserving Quadrupeds, Reptiles, Fishes, and Insects. By M. de Reaumer, F. R. S. and Member of the Royal Acad. of Science, Paris. Translated from the French by Phil. Henry Zollman, Esq., F. R. S. <*Philos. Trans.*, xlv, 1748.

1752. DUHAMEL, H. L. Avis pour le transport par mer des arbres des plantes vivaces des semences et de diverses autres curiosités d'histoire naturelle. *Paris*, 1752, 12mo.

Not seen; title from Quérard, La France Littéraire.

1758. ANON. [TURGOT, E. F.] Mémoire | Instructif | Sur La Manière | De Rassembler, De Préparer, | De Conserver, | et D'envoyer | Les Diverses Curiosités | D'Histoire Naturelle; | Auquel on a joint un Mémoire intitulé: | Avis pour le Transport par mer, des Arbres, | des Plantes vivaces, des Semences, & de | diverses autres Curiosités d'Histoire Naturelle. | A Paris, & se vend | A Lyon, | Chez Jean Marie Bruyset, Libraire, rue | Mercière, au Soliel d'or | M.DCC.LVIII. | 12mo., 235 pp. 24 fig. of method.

†1761. ANON. [TURGOT.] Anweisung, wie die verschied. Seltenheiten der Naturgeschichte zu sammlen zuzubereiten, zu erhalten und zu verschicken sind. Nebst einer Anweis; wi die Bäume, die Pflanzen, die saamen und verschied. and Seltenheiten der Naturgeschichte über Meer zu verschicken sind. Samt vielen Kupf aus dem Franz, (des Ritter von Turgot, 1758,) übersetzt von Wolfg-Jager. (Mit 25 Kpfrtaf.) gr. 8, Nürnberg, 1761.

†1763. MARUY. Méthode nécessaire aux marins et aux voyageurs, pour recueillir avec succès les curiosités de l'histoire naturelle, dans les lieux de leur origine, et de les ajuster pour les faire parvenir en bon état à leux destination. (Avec 2 pl.) 8 vo. Paris, 1763.

†1771. MAUDUYT. Mémoire sur la manière de se procurer les différentes espèces d'animaux, de les préparer et de les envoyer des pays que parcourent les voyageurs. (Extr. du Journal de Physique de Rozier.) Avec 2 pl. in 4. Paris.

*1771. DAVIES, T. A Letter from Captain Davies to John Ellis, Esquire, F. R. S. on a Method of preparing Birds for Preservation. <*Philos. Trans.* for 1770, lx, 1771, pp. 184–187.

1771. FORSTER, J. R. Short directions for collecting, preserving, and transporting all kinds of natural history curiosities. <CATALOGUE OF THE ANIMALS OF NORTH AMERICA, BY JOHN R. FORSTER, F. A. S. London.

Not seen; title from "Bibliotheca Americana Nova," Rich.

1771. KUCKHAN, T. S. Four letters from Mr. T. S. Kuckhan to the President and Members of the Royal Society, on the preservation of dead birds. <*Philos. Tran.* for 1770, lx, 1771, pp. 302–320.

1774. LETTSOM, J. C. The | Naturalist | and | Travellers' Companion, | Containing | Instructions for Collecting and Preserving Objects of | Natural History, | and | for promoting inquirie after human | Knowledge in general. | The second edition, corrected and enlarged. | By John Coakley Lettsom, M. D., F. R. S. and S. A. | [Illustration.] | London: Printed for E. & C. Dilly. 1774. 8vo., xvi, 89 pp.

First and third edition in 1773 and 1799; not seen; was translated into both French and German. Most of the Taxidermy (about four pages) is credited to Kuckhan's letters in the *Philos. Trans.*, 1771.

1774. M[URR,] C. G., v. Von der besten Art, Vögel in Sammlungen aufzubehalten. Aus dem Gentleman's Magazin vom J. 1772. <*Naturforscher*, i, 1774, pp. 262, 263.

*1774. PACIUS, G. F. Zwo vortheilhafte Arten Vögel und kleine vierfüssige Thiere auszustopfen. <*Naturforscher*, ii, 1774, pp. 87–89.

1775. MEYER, [JOH. CARL FRIED.] Vom Nutzen des Salmiaks bey Ausstopfung der Vögel. <*Beschäftigungen der Berliner Gef. Naturf. Fr.*, *B. i*, 1775, *S.* 423.

1782. MAUDUYT. Mémoire sur la manière de preparer les oiseaux morts, par Mauduyt. <*Encyclopédie Méthodique*, vol. cxvi, 1782, pp. 434–468.

1783. LÖWE, [JOHANN CARL CHRISTIAN.] Vermischte Naturhistorische Bemerkungen: 1) 2) 3) 4) vom Aufbewahren der Vögel. <*Hallische Naturforch. Gesellsch.*, B. 1, N. ST. 21, 134.

1786. MANESSE, L'ABBE DEN. JOS. Traité sur la manière d'empailler et de conserver les animaux et les pelleteries. Paris, 1786.

Not seen; title from Dufresne, 1819; also given by Lesson, 1828.

1788. ANON. (D. B.) Gürndliche | Anweisung | Vögel auszustopfen | und | besonders gut zu conserviren | [Illustration.] | Leipzig | bey Adam Friedrich Böhme | 1788. 16mo., pp. i–xxiv, 1–88.

1791. PINEL, P. Les Préparations Ornithologiques.

Not seen; title from Nouvelle Biographie Generale.

1793 [?] PINEL, P. Mémoire sur les moyens de préparer et de conserver les quadrupèdes et les oiseaux distinés à former des collections, etc. <*Journal de Physique, tome* 39.

Not seen; title from Lesson, 1828.

1794. DONOVAN, E. O. Instructions for Collecting and preserving various subjects of Natural history, as animals, birds, reptiles, shells, corals, plants, &c. With a treatise on the management of insects in their several states, selected from the best authorities. 8vo. London, 1794.

Not seen; title from Bibliotheca Britannica.

1795. Dr. CUTLER's method of preserving the skins of birds. <APPENDIX, COLL. OF THE MASS. HIST. SOCIETY, Boston, 1795.

1795. LETTSOM, Dr. A method of preserving birds and other animals. From the Philosophical Transactions, recommended by Dr. Lettsom in his Traveller's Companion, p. 13. <APPENDIX, COLL. MASS. HIST. SOCIETY, Boston, 1795.

1795. PECK, WM. D. Mr. Peck's method of preserving Animals and their Skins. <APPENDIX, COLL. MASS. HIST. SOCIETY, Boston, 1795.

†1797. [DONOVAN, E. O.] Anleit Alle Arten Natürl Körper, als Säugthiere, Vögel, Amphibien, Fische, Planzen, etc., zusammeln und aufzubewahren frei bearb. Von J. Jac. Römer, Mit 1 kpfn, 8vo., Zurich, 1797.

Free translation of Donovan, 1794.

†1799. Pistorius, Geo. [Geo. Bekker.] Anleit. zum ausstopfen und aufbewahren der Vögel und Säugthiere. 8vo. Darmstadt, 1799.

1800. Daudin, F. M. Sur l'art de la Taxidermie considéré par rapport aux Oiseaux; c'est-à-dire, sur l'art de depouiller, de droguer, de conserver et de monter les Peaux d'Oiseaux. < Traité élémentaire et complét d'Ornithologie, vol. ii, 1800, pp. 439–462.

1801. Nicolas, P. F. Méthode | De Préparer et Conserver | Les Animaux | De toutes les classes, | Pour les cabinets d'histoire Naturelle; | Par P. F. Nicolas, | Membre non-resident de l'Institut-National, ancien Professeur de Chimie et d'Histoire Naturelle. | Avec dix Planches gravés en taille-douce. | A Paris, | Chez F. Buisson, Imp.-Lib., rue Hautefeuille, no. 20. | An. IX. (1801.) 228 pp.

*1801. Hénon, —, et Mouton-Fontenille [,J. P.] Observations | et | Expériences | sur l'art d'empailler et de conserver | les Oiseaux | Par les C.ns Hénon, [etc.] | et Mouton-Fontenille,[etc.] | [dessin.] | Lyons. Bruyset Ainé et Comp. | An. IX=1801. 1 vol., 16mo., 1 pl., pp. vi, 91, 1 l.

Not seen.

†1802. Stein, P. S. Handbuch des Zubereitens und Aufbewahrens der Thiere aller Classen die für Naturalienkabinette bestimmt sind; enthalt. dic Methoden des Bürgers Nicholas, d. Hrn. Schamburg und Hoffmann. Mit Kpfrn. 8vo. Frankfurt A. M. 1802.

†1802. Zinke, G. Gtfr. Die Kunst allerhand natürliche Körper zu sammeln, zuzubereiten für das Kabinet und sie vor Zerstörung feindlicher Insecten zu sichern. Jena, 1802. vi, 159, SS. 8.

1803. Dufresne, L. (See 1819.)

‡1806. Gérarden, de M. Seb. Tableau élémentaire d'Ornitholgie ou histoire naturelle des Oiseaux que l'on rencontre communièment en France; suivi d'un traité sur la manière de conserver leurs dépouilles pour en former des collections et un atlas de 41 pll. 4to. Paris, 1806.

2d ed. Paris, 1821, 4to., 2 voll., 41 pll., 4 tabl.

†1808. Swainson, Wil. Instructions for collecting and preserving all subjects of natural history and botany. (Privately printed.) 8vo. Liverpool, 1808.

*1811. Mouton-Fontenille, J. P. L'Art | d'Empailler | les Oisseaux, | Contenant des Principes au théorie nouveaux, | et des Procédés de practique avantageux pour | conserver à chaque Famille ses formes et ses attitudes naturelles; | Faisant suite au Traité élementaire | d'Ornithologie. | Par M. J. P. Mouton-Foutenille, | [etc., 5 lignes.] A Lyon, | Chez Yvernault et Cabin, Libraires de l'Académie, rue St.-Domingue, n.o 64. i– | 1811. 1 vol., 8vo., xvi, 171 pp., pl. i–v.

This is a late edition, the previous one by Hénon and the present author in 1802—this itself being a second edition of "Observations et experiences sur l'art," &c., Lyons, 1801.

*1814. Belknap, Rev. Jeremy. Circular letter of the Massachusetts Historical Society, respectfully addressed, in 1794, by Rev. Jeremy Belknap, D. D., then Corresponding Secretary, to every Gentleman of Science in the Continent and Islands of America. < Collections of the Massachusetts Hist. Society, 2d Ser., i, pp. 14–26. Boston, 1814.

‡1815. Bartholomael. Die Wissenschaft Vögel aufzulegen. Marburg, 1815, 8vo.

†1815. NAUMANN, JOH. FR. Taxidermie oder die Lehre, Thiere aller Klassen am einfachsten und zweckmässigsten für Kabinette ausstopfen und aufzubewahren, parkt. bearb. Mit 5 Kpfrn., gr. 8vo. Halle, 1815. Schwetschke und Sohn.

1818. GRAVES, GEORGE. Instructions for preserving mammals and birds. < THE NATURALIST'S POCKET BOOK OR TOURIST'S COMPANION. London, 1818.

Coll. mammals, pp. 43-56; birds, pp. 128-135.

1818. BULLOCK, W. A short and easy method of preserving subjects of Natural History. 1818.

Not seen; title from Allibone's Dictionary of Authors.

†1818. SCHMIDT, CHS. FR. Versuch über die beste Einrichtung zur Aufstellung der verschiedener Naturkorper, U. S. W. Gotha, 1818.

*1818. ——— ———. Instruction sur les Recherches qui pourraient, être faites dans les Colonies, sur les objects qu'il seroit possible d'y recueillir, et sur la manière de les conserver et de les transporter. < *Mém. du Mus. d'Hist. Nat.*, iv. pp. 193-239. 1818.

A series of papers compiled by the officers of the Museum.

1819. DUFRESNE, L. Taxidermie. < DICTIONNAIRE D'HISTOIRE NATURELLE. Vol. xxxii, pp. 529-592. Paris, 1819.

First edition in 1803.

1819. LESSON, R. P. Manuel de Taxidermie à l'usage des Marines, par Lesson; six articles. < *Annales Maritimes et Coloniales*, 1819.

Not seen; title from Lesson, 1828.

†1820. DUFRESNE, L. Taxidermie, ou l'art de préparer et de conserver la dépouille de tous les animaux, pour les musées, les cabinets d'histoire naturelle, etc. 8vo. Paris, 1820.

1820. [DUFRESNE, L.] Taxidermy; or the art of Collecting objects of Natural History. London, 1820.

Not seen; title from catalogue. Impressiorum Librorum in Bibliotheca Bodlerana.

†1821. BOITARD, M. P. Le cabinet d'histoire naturelle, formé des productions du pays même que l'on habite, avec la méthode de classement, l'art d'empailler les animaux et de conserver les plantes et les insectes. 2 vols. Avec pl. 18mo. Paris, 1821.

1821. MAWE, JOHN. The | Voyager's Companion | or Shell Collector's Pilot, | with | Instructions and Directions where to find | the finest shells | also | for preserving the skins of Animals | and the | best methods of catching and preserving insects, | &c., &c., &c. | By John Mawe, | Author of Treatise on Shells, Lessons on Mineralogy, | Travels in Brazil, &c. | Third edition, with Colored Plates. | London. | Printed for and sold by the author, | 49 Strand, | and Longman, Hurst, Rees, Orme & Brown, | Paternoster Row. | 1821. | Price 5*s.* 16mo., 56 pp.

1823. ———. [DUFRESNE, L.] Taxidermy; | or, | The art | of Collecting, preparing, | and | Mounting | objects of Natural History, | For the use of | Museums and Travellers, | with Plates. | The third edition. | London: | Printed for | Longman, Hurst, Rees, Orme & Brown, | Paternoster Row. | 1823. 12mo., 168 pp. 19 figures, 8 on Tax.

First edition, 1820. The first five editions of this translation were not signed. The sixth (1849) is revised, a few notes added, and signed "Mrs. R. Lee, formerly Mrs. Ed. Bowdich," who claims the credit of writing the first English treatise on Taxidermy, forgetting that the first three editions, at least, were literal translations of Dufresne.

1824. —— [Gill, C. T.] On preserving the Skins of birds, beasts, and other Animals, and the bill of the Toucan. By C. Waterton, [*i. e.*, as practiced by Waterton.] < *Technical Repository*, vol. 5, pp. 250–51, 1824.

1824. Schmidt, G. F. Answer to the query in our last number on preserving birds and other subjects of natural history. By G. F. Schmidt, Esq. < *Technical Repository*, vol. 5, pp. 166–167, 1824.

*1824. Sinclair, J. Preserving of Birds, &c. < *Edinb. Philos. Journ.*, xi, 1824, p. 415.

Not seen.

†1824. Swainson, Will. The naturalist's guide for collecting and preserving all subjects of natural history and botany, intended for the use of students and travellers, with 2 pl. 12mo. London, (1822) 1824.

1825. Boitard, Manuel | du | Naturaliste | Préparateur | ou l'art | D'Empailler Les Animaux | Et De Conserver | Les Végétaux Et Les Minéraux. | Par M. Boitard, | Naturaliste. | Paris, | Roret, Libraire, Rue Hautefeuille, | Au coin de celle du battoir. | 18mo., 244 pp. 1825.

1825. Roux, P. d'Ornithologie Provencale suivie d'un Abrégé des chasses de quelques instructions de Taxidermie et d'une Table des Noms vulgaires. Marseille, 1825. 3 vol., 4to., 444 coloured plates.

Not seen ; title from Bruné Manual du Lib.

*1825. Traill, T. S. On the preservation of Zoological specimens from the depredations of insects. < *Edinb. Philos. Journ.*, xiv, 1825, pp. 135–138.

Not seen.

1825. Waterton, C. On preserving birds for cabinets of natural history. < Wanderings in South America. By Charles Waterton.

First edition, 1825, 4to.; fourth ed., 1828, 8vo.; eighth ed., 1877, 16mo.; and a cheap edition in 1882. London: MacMillan & Co.

‡1826. Lecocq, H., et Boisduval, A. Taxidermie enseignée en dix leçons ou l'art d'empailler les Oiseaux, les quadrupèdes, les reptiles, et les poissons, Paris, 1826. 12mo., 3 pll.

‡1827. Brassart, J. G. Anweisung zum Abbalgen, Ausstopfen und Conserviren der Vögel und Säugethiere nach eigenen vieljährigen Erfahrungen. Bonn, 1827. 8vo.

1827. Brehm, C. L. Das Ausstopfen der Vögel. < *Oken's Isis*, Bd. xx, 1827. pp. 147–168.

‡1827. Anon. Ausstopfer, der oder in kurzer Zeit gut und natürlich Vögel ausstopfen zu lernen. Veranlasst durch einen Freund von F. A. C. J. Querfurth. 1827. 8mo.

†1827. Dupont, aîné, Edouard. Trait de Taxidermie, ou l'art de conserver et d'empailler les animaux. 2 édit., revue, avec 4 pl. 8mo. Paris, (1823) 1827.

†1827. Thon, Theod. (C. G.) Handbuch, für naturaliensammlungen oder gründliche anweisung die naturkörper aller drei Reiche zu sammeln, im naturalienkabinet aufzustellen und aufzubewahren. Flei nach dem Franz bearb. und vervollständ. mit 38 fig. auf 4 Steintaf. 8vo. Ilmenau, 1827, (Weimar) Voigt.

Free translation from Boitard, Manuel du Naturaliste Preparateur. Paris, 1825.

*1828. Brehm, C. L. Das Ausstopfen der Vögel. < *Oken's Isis*, Bd. xxi. 1828. pp. 1244–1267.

Continuation of the article in Isis, 1827.

†1828. Danger, F. P. Mémoire sur une nouvelle méthode de préparer et de rendre durables les collections d'œufs d'Oiseaux. Avec 1 pl. <*Ann. Scienc. natur.* T. xv, 1828, pp. 338–347.

1828. Lesson, R. P. Taxidermie. <Dictionnaire des Sciences Naturelles, vol. 52, pp. 353–436.

‡1829. Richter, E. G. Vögel auzusstopfen nebst allen dazu erforderlichen Hülfsmitteln. Mit Vorrede von Brehm. 1829. 12mo. 2 T ff.

†1830. Suckow, Fried. Wilh Ludw. Vademecum für naturaliensammler, oder vollständ Unterricht, Säugethiere, Vögel, Amphibien, Fische, Käfer, Schmetterlinge, Würmer, Pflanzen, Mineralien, Petrefacte, etc., zu sammeln zu conserviren und zu versend. Mit 3 lith. Taf. gr. 12. Stuttgart, 1830.

1830. Gentile, P. Taxidermie. <Dictionnaire Pittoresque Naturelle, vol. 9, pp. 271–288.

1830. Lesson, R. P. Taxidermie. <Dictionnaire Classique d'Histoire Naturelle, vol. 16, pp. 78–807.

*1830. Thompson, E. P. Softening the Skins of Birds, (in ans. to J. A. H.) <*Loudon's Mag. Nat. Hist.*, iii, pp. 192–193.

1830. Waterton, C. Preservation of birds for Cabinets of natural history. < *Technological and Microscopical Repository*, vol. 5, 1830.
From "Wanderings in South America."

*1830. "A. Z." To soften the Skins of Birds. <*Loudon's Mag. Nat. Hist.*, iii, 1830, p. 93.

*1830. "H." Softening the Skins of Birds. <*Loudon's Mag. Nat. Hist.*, iii, 1830, p. 93.

*1831. Woodbridge, W. C. Short directions for the preparation, preservation, and also the transportation of Mammiferous and Amphibious Animals, Birds, Fishes, &c. Issued by the Senkenberg Institution for Nat. History in Germany. Translated by W. C. Woodbridge. <*Sillim's Am. Journ. Sci.*, xix, 1831, pp. 32–57.

†1832. Junker, F. C. Dianassologie, oder die Lehre vom Ausstopfen der Thierkörper und wie solches auf die leichteste Art erlernt, auch wie von einem Jaden, ohne fremde Anweis und mit geringen Kosten, ein Naturalien-Cabinet angelegt werden kann; nebst einer gründliche anweis zum Fangen, Sammeln und Zubereiten der Insecten zu diesem Behufe. Für liebhaber von Naturaliensammlungen, nach eigen Erfahrungen bearb. 2 auff., mit 2 lith., taf. 8vo. Hanan (1825) 1832.

†1832. Suckow, Fried. Wilh. Ludw. Das naturalien-Cabinet, oder grundlich anweis wie der Naturfreund bei naturhistor. Excursionen und bei dem Sammeln, Ausstopfen, skeletisen, etc., der Naturkörper jeder Art, namentl. der Säugethiere Vögel, Fische, Reptilien, Käfer, Schmetterlinge, Pflanzen, Mineralien, Petrefacte, &c., Verfährt, wie er sie versenden und in Sammlungen dauernd schön conserviren, kann Nebst lith., Abbildgn der erforderl Werkzenge (auf. 3 Taf. in gr. 4.) 12mo. Stuttgart, 1832.

‡1832. Klener, G. A., Chr. Anleitung zum ausstopfen und Aufbewahren der Vögel und Säugethiere zum Selbstunterricht aus eigener Erfahrung geschrieben. Göttingen. 1832. 8vo.

1833. **Waterton, C.** Preserving the Color of the Legs and Bills of Stuffed Birds. < *Loudon's Mag. Nat. Hist.*, vi, 1833, pp. 183–184.

‡1834. **Boitard, P.** Compendio di Tassidermia e manuale del naturalista preparatore contenante l'arte di ottenere di preparare e di conservare gli oggetti di Storia naturale. Milano, 1834. 2 vol., 32mo.

*1834. **Breton.** On a Mode of Preserving Bird-skins in the absence of the ordinary means. < *Proceedings London Zoological Society*, ii, 1834, p. 21.

‡1835. **Boitard, P.** [?] Die Kunst Thiere auszustopfen und Pflanzen und mineralien aufzubewahren. Quedlinburg, 1835 and 1854.

Trans. by Bauer.

†1835. **Pearson, J. T.** Hints for the preservation of objects of natural history. < *Jour. of the Asiat. Soc. of Bengal*, vol. iv, pp. 462–471.

†1835. **Oppermann.** Ausstopfen der Thiere, etc. Delmenhorst, 1835.

Not seen; title from Martin's "Praxis." (See 1869.)

†1837. **Campiglio, Stefan.** Cenni sulle preparazioni zoologiche. 8vo. pp. 84. Milano, 1837.

*1837. **Richter, Dr. H.** Ueber die Annendung der Schwefelblumen zum Ausstopfen der Thiere. < *Oken's Isis.* Vol. xxx, 1837, pp. 520–522.

[Versammlung der Naturforcher und Aerzte zu Jena. (Sechste Sitzung am 25 Sept., 1836.)]

1837. Directions for collecting and preserving objects of natural history. Issued by the Maryland Academy of Science and Literature. < TRANS. MARYLAND ACAD. SCI. AND LIT. Vol. 1, pp. 148–54, 1837.

Not signed, but credited to W. E Coal, J. H. Quimby, and H. H. Hazlehurst in Trans. Nat. M. Inst. Prom. Science.

†1838. **Bronn, H. G.** Gedrängte Anlirt. zum Sammeln Zubereiten und Verpacken von Thieren, Pflanzen und Mineralien für naturhistor. Museen, bearb. für reisende und fernländ Sammler. 12. Heidelberg, 1838.

‡1838. **Naumann, J. Fr.** Taxidermie oder die Lehre, Thiere aller Klassen am einfachsten und Zweckmässigsten für naturaliensammlungen auszustopfen und aufzuberwahren. 2 Anfl. Halle, 1838. 8vo. 218 pp. 6 pll.

Martin gives the second edition of this work as printed in 1848.

1839. **Waterton, C.** Museums. < ESSAYS ON NATURAL HISTORY. London, 1839. pp. 531.

There were several editions of this book. The one before me was edited by N. Moore, London, 1870.

1840. **King, H.** Directions | for making | Collections in natural history, | prepared for | the National Institution for the Promotion of Science, | by | H. King, M. D. | Washington: | Printed by Gales & Seaton. | 1840. pp. 24. 8vo.

1840. **Swainson, W.** Taxidermy, | with the | Biography of Zoologists | and notices of their works, | by | William Swainson, A. C. G., F. R. S. | *London:* | 1840. 12mo., pp. 392, cuts.

Lardner's Cabinet Cyclopædia.

1841. **Evans, P.** L'art de préparer, monter et conserver les oiseaux, suivi de la manière de prendre, préparer et conserver les papillons et autres insectes, par P. Evans, etc. 8mo. A Paris, chez. G. A. Dentu, imprimeur libraire et chez l'auteur. 1841.

Not seen; title from C. L. Brehm's "Die Kunst Vogel," &c., which is in great part a free translation of Evans. Second edition of Evans in 1850.

‡1841. Boswell, P. Art of Taxidermy; containing a practical knowledge of the most improved methods of preserving quadrupeds, birds, fishes, insects, and other objects of natural history. London, 1841. 8vo.

Entered in the "London Catalogue" as dated 1842.

1843. Lee, Mrs. R. Taxidermy, sixth edition. Revised and enlarged. London, 1843. 12mo. 244 pp.

See note to Dufresne, 1823.

1843. Walchner. Der praktische Naturforscher. Abtherlungen. Karlsruhe, 1843.

Not seen; title from Martin's. (See 1869.)

1843. Willich, C. M. Letter on M. Gannal's method of preserving animal substances. <*Proceedings Zoological Society*, xi, pp. 135, 136. 1843.

Relates in part to preservation of birds' feathers.

‡1844. Lewen, Fr. Anweisung zum Abbalgen, ausstopfen und Conserviren der Vögel Säugethiere Fische und Amphibien. Hidelberg, 1844. 8vo. 1 Thl.

*1845. Haupt, H. Hints upon the preparation of Zoological Specimens. <*Literary Record and Journal, Linnæan Association of Penn. College*, i, 1845, pp. 38–41.

1845. Held, A. Demonstrative Naturgeschichte | oder | Erfahrungen und Belehrungen über das Sammeln | Präpariren, Klassificiren Austellen, Bewahren und | Demonstriren der naturkörper aller drei Reiche | nebst | Beschreibung der Lebensweise der Thiere, sowie ihrer | Körperhaltung bei allen Bewegungen | von | Dr. Alexander Held, | naturalienkabinets-Kustos zu München | Bevorwortet | von | Dr. G. H. von Schubert | Hofrath und Professor u. u. zu München | mit sieben tafeln Abbildungen. | Stuttgart: | Hallberger'sche Verlagshandlung. | 1845. 8vo. pp. xxiv–536, 7 plates.

Two (seven cuts) are methods in Taxidermy.

†1845. Strenbel, der Konservator oder praktische Anweisung, etc. *Berlin*, 1845.

1846. Baird, S. F. Hints | for Preserving | Objects of Natural History. | Prepared by Prof. S. F. Baird, | for | Dickinson College, Carlisle, Pa. | Carlisle: | Printed by Gitt & Hinckley, | 1846. 8vo., pp. 12.

*1849. Bird, W. F. W. Moths in bird skins. <*Zoologist*, vii, 1849, p. 2494.

*1849. Duff, J. Moths in bird skins. <*Zoologist*, vii, 1849, p. 2450.

1850. Baird, S. F. General directions for collecting and preserving objects of natural history; published by the Smithsonian Institution.

Not seen; title from "Bibliography of Publications of Prof. S. F. Baird," by Prof. G. B. Goode.

1851. Brown, T. The Taxidermist's Manual: | or the art of collecting, preparing, and | preserving objects of | Natural History. | Designed for the use of | Travelers, Conservators of Museums | and private Collectors | by Captain Thomas Brown, F. L. S., | conservator of the Manchester Museum of Natural History. | Late President of the Royal Physical Society, &c., &c., &c. | Tenth edition. | A. Fullarton & Co. London and Edinburgh. | 1851. 12mo., pp. xii, 150. (Six plates—two of methods, containing six figures.)

This (the tenth) is the first edition that I have seen, or that I can find any notice of; the 14th edition appeared in 1858, and the 20th in 1870. There are three or four American reprints.

‡1852. BOITARD, P. Nouveau manuel complèt du Naturaliste préparateur ou art d'empailler les animaux etc. Paris, 1852. 18mo., pp. 404.

1853. BAIRD, S. F. Directions for making collections in natural history, prepared for the use of parties engaged in the exploration of a route for the Pacific Railroad along the 49th parallel. 4to., about 10 pp.

Not seen; title from "Bibliography of Publications of Prof. S. F. Baird," by Prof. G. B. Goode.

†1853. BATIZFAVI, SAM'N. Utasitás embösök hüllök és halak börének lefejtérése, kitömése és fenntarására. Termeszebuvárok, gyüztök és szakkedvelök számára. Par sodro nyváz és müszertáblával. Pest, Nyom. Lukás, L. 1858. 8vo. pp. 43.

‡1853. PATTI, M. Z. Su varii metodi di preservazione per l'impagliamento degli Uccelli. < *Atti. Accad. Gioenia*, 1835. VIII, 141.

1854. ADAMS, A. Directions for collecting and preserving objects of Natural History. < MANUAL OF NATURAL HISTORY, by A. Adams, W. B. Baikie, and C. Barron. London, 1854, Part 4, pp. 623–693.

1854. BLAKEY, R. On the preservation of birds for stuffing. < MANUAL OF SHOOTING, by Robert Blakey. London, 1854.

1854. LEWIS, E. J. Some Hints on Taxidermy. < HINTS TO SPORTSMEN, by E. J. Lewis, pp. 345.

A short chapter on skinning birds credited to Lee's Taxidermy.

*1855. ALTUM, B. Planmässiges Sammeln der Vögel und planmässiges Ausstopfen und Stellen derselben. < *Naumannia*, 1855, pp. 29–38, 2 pll.

*1855. ALTUM, B. Ueber Austopfen und Stellen der Vögel in Allgemeinen. < *Naumannia*, 1855, pp. 301–307.

1855. LEWIS, E. J. Some Hints on Taxidermy. < AMERICAN SPORTSMAN, p. 456.

A repetition of the chapter in "Hints to Sportsmen."

*1856. ALTUM, B. Aphoristische Bemerkungen für Ausstopfer. < *Naumannia*, VI, pp. 35–40, 1856, Taf. I.

These three articles by Altum are principally critique on the positions of museum specimens, and the plates are models for groups.

†1856. MARTIN, L. Ueber gewerckmässiges Sammeln und Aufstellen von Thieren der höheren Klassen in Sammlungen. < *Naumannia*, VI, 1856, pp. 485–500.

1857. BAIRD, S. F. Directions for collecting, preserving, and transporting specimens of natural history. Prepared for the use of the Smithsonian Institution. < ELEVENTH ANN. REP. SMITHSONIAN INSTITUTION, (1856,) 1857. pp. 235–253.

*1857. BOCK. Notiz für Austopfer. < *Journal für Ornithologie*, v, pp. 376–'77, 1857.

†1858. DAVIS, JAMES BOYD. The practical naturalist's guide, containing instructions for collecting, preparing, and preserving specimens of all departments of zoology. Edinburgh: Maclachan & Stewart, 1858. 12mo. 80 pp.

Given in London Cat. as 1851.

1859. BAIRD, S. F. Smithsonian Collections. | Directions | for | Collecting, Preserving, and Transporting Specimens of Natural History. | Prepared for the use of the Smithsonian Institution. | [Third edition.] | Washington: | Smithsonian Institution. | March, 1859. 8vo., pp. 40.

Forming Art. VII of Vol. II of the series, but oftener found separate.

*1859. Cabot, S. Note on the ravages of Dermestes and Anthreni in Specimens of Birds. <*Proceedings Boston Soci. Nat. Hist.*, vii, 1859, pp. 5.

1859. Boitard, M. Manuels Roret. (See 1825.) 16mo., 498 pp.

Five folding plates containing 134 cuts and diagrams, 10 of methods of Taxidermy.

1859. Hammargren, T. Om foglarnas uppstoppning och förvarande. <Inledning till Foglarnes Natural Historia af T. Hammargren. Stockholm, 1859. 12mo.

1860. Brehm, C. L. Die Kunst, | Vögel | als Bälge zu bereiten, | auszustopfen, aufzustellen und aufzu- | bewahren. | Nebst einer Kurzen Anleitung | Schmetterlinge und Käfer | zu fangen, zu präpariren, aufzustellen und | aufzubewahren. | Nach dem genauesten Beobachtungen in der Natur | und vieljährigen Erfahrungen dargestellt | von Chr. Ludw. Brehm, | [N. S. W.] | Zweite, verbesserte und Vermehrte Auflage. | Weimar, 1860. | Bernhard Friedrich Voight. Sm. 16mo., pp. i–x, 145.

Free translation of "Evans' L'art de Preparer," 1841. Martin puts this book as a first edition in 1842.

1860. ——. Ausstopfen, Dermoplastik. <Brockhaus Illustrirtem Haus und Familier Lexikon. Leipzig, 1860–'65.

Articles on Taxidermy under these headings.

*1861. Berling, Dr. Der praktishe Thier Ausstopfer oder gründliche Anweisung, Säugethiere, Vögel Amphibien Fische und Schaal-thiere nach einer Sketes, Naturgetreu Auszustopfen und zu conservieren nebst einem Anhange über die zweckmassige Anfertigung und Bearbeitung der Bälge und Haüte, Ein Leitfaden zum Selbstunterrichte für Conservatoren Förstmänner, Jagdliebhaber, Naturfreunde und Sammler. Mit 3 Tafeln lithog. Abbildungen. E. Schotle & Co., 1861, 8vo., pp. 147. Berlin.

Not seen.

1861. Schilling. Hand und Lehrbuch für angehende Naturforscher und Natur-Aliensammler. Weimar, 1861, 3 band.

Not seen; title from Martin. (See 1869.)

1862. Bocage, J. V. Barboza du. Instrucções praticas | sobre | o modo de colligir, preparar e remetter | productos zoologicos | para | o museu de Lisboa. | Por | J. V. Barboza du Bocage, etc. | Lisboa, imprensa Nacional, 1862.

1862. Éloffe, A. Traité Pratique | du | Naturaliste | préparateur | par | Arthur Éloffe | naturaliste-préparateur et Professeur de taxidermie | membre de plusieurs Sociétés d'horticulture, | Lauréat aux expositions de Paris, Dijon, Valognes, etc., [illus.] | Paris. | Ch. Albessard et Bérard, lib. éditeurs | 8rue Guénégaud; | même maison à Marseille, 25 rue Pavillon | 1862. Tous droits réservés. 12mo., 225 pp.

15 illustrations, 9 of method.

1862. Holder, R. H. Taxidermy. Direction for Collecting and preserving specimens in Ornithology. <*Trans. Ill. Nat. History Society.* Vol. 1, pp. 69–74.

5 plates, 15 figures, 11 of method. Embodied also in "Trans. Ill. Agriculture Society. IV, for 1859–60.

*1863. Collett, R. (?) Taxidermi. Veiledning for dem som ville paatage sig Indsamling af naturvidenskabelige Gjenstande for Universitte og. dets Samlinger, *Christiania*, 1863.

Not seen.

1863. (?) PREVOST, F. De la Chasse, et de la préparation Des Oiseaux. < HISTOIRE NATURELLE DES OISEAUX, par Florent Prévost et C. L. Lemaire, Paris.

No date.

1865. SYLVESTER, S. H. The | Taxidermists' | Manual, | Giving full instructions in | Mounting and Preserving Birds, | Mammals, Insects, Fishes, Reptiles, Skeletons, Eggs, &c. | 2d edition, price $1. By S. H. Sylvester, Taxidermist. | Middleboro, Mass.: | Published by the Author. | 1865. | 29 pp.

Cf. "American Naturalist," I, 1867, pp. 321.

1868. STEVENS, S. Hints to Naturalists. < WRINKLES, OR HINTS TO SPORTSMEN AND TRAVELERS, by A. H. Levison, London, 1868.

The compilation of the chapter on preserving specimens and trophies is credited to Stevens by the author of the book.

1869. MARTIN, P. L. Taxidermie | oder | die Lehre vom Konserviren, Präpariren und Naturalier— | sammlen auf Reisen, Ausstopfen und aufstellen der Thiere, Naturalienhandel, etc. | Dritte auflage | von C. L. Brehm. "die Kunst, Vögel als Bälge zu bereiten, etc.," | in gänzlicher, Umarbeitung | von | Philipp Leopold Martin, | Mit. 5, Lithographirten Tafeln nach Zeichnungen | von | Friedrich Specht. Weimar, 1869. | Bernhard Friedrich Voigt. 8vo., 160 pp.

5 plates, 75 figures, 11 on Taxidermy.

*1869. WALKER, C. A. Hints on Taxidermy, by C. A. Walker. < *American Naturalist*, iii, 1861. Three chapters, pp. 136, 189, and 481.

1870. AVIS, R., (pseud.?) Bird preserving, Bird mounting, and the preservation of Birds' eggs, with bird catching. London, 1870. 16mo.

Not seen; title from "Catalogue of the Brooklyn Library."

1870. BROWN, T., (see 1851.) American revised edition. G. P. Putnam's Sons. pp. 150.

1870. DAVIES, J. B. Practical naturalist's guide. New edition. By R. Brown and J. Middleton.

Not seen; title from "Catalogue of the Brooklyn Library."

1870. GARDENER, J. Taxidermy | made easy; being | plain and practical directions | for | preserving, setting up, and Embellishing | in the most approved style | all kinds of Quadrupeds, Birds, Fishes, | Reptiles, Insects, etc., | with notes and illustrations | designed for the use of private individuals, | museums, etc. | Fourth edition | enlarged. | Published by Jas. Gardener, | Naturalist to the Royal Family. | Chief office, 426 Oxford street. Branch depots, 52 High Holborn, W. C., | and 292 Oxford street W., | Corner of Davis street. 1870. *London*. 16mo., pp. xiv + 88, 1 p. of cuts.

Not seen; title from Mr. Lucas's Bibliography.

1870. MARTIN, P. L. Dermoplastik und Museologie | oder | das Modelliren der thiere und das aufstellen und | Erhalten von Naturaliensammlungen, | unter Mitwirkung | von | Präparator Bauer, Professor Dr. Gustave Jäger | Stadurektions-Arzt Dr. Stetdel | und der | Thier-und Landshaftsmaler Paul Meyerheim und Friedrich Specht | Von | Philipp Leopold Martin. | Mit 6 lithographirten Tafeln. | Weimar, 1870. 8vo., pp. 240. *Cf. *Journal für Ornithologists*, 1870. pp. 380–382.

Thirty-four illustrations, two of method, but the figures are particularly fine as models.

CONSTITUTION

OF THE

SOCIETY

OF

AMERICAN TAXIDERMISTS.

NAME.

ARTICLE 1. This body shall be known as the SOCIETY OF AMERICAN TAXIDERMISTS.

OBJECTS.

ARTICLE 2. The objects of this Society are to promote intercourse between those who are interested in the art of Taxidermy in various parts of America, to encourage and promote the development of that art, and to elevate it to a permanent and acknowledged position among the fine arts.

MEMBERSHIP.

ARTICLE 3. Any taxidermist, whether amateur or professional, may become a member of the Society upon the written recommendation of one member, nomination by the Executive Committee, and election by a majority of members present at any regular meeting.

ARTICLE 4. The Society shall consist of Active members, Corresponding members, and Honorary members.

OFFICERS.

ARTICLE 5. The officers of the Society shall be elected by ballot in general session, and shall consist of a President, Vice President, Secretary and Treasurer, each of whom shall be elected at each annual meeting for the following one.

ARTICLE 6. The President, or in his absence the Vice President, shall preside at all general sessions of the Society, and at all meetings of the Executive Committee.

It shall be the duty of the President to give an address at a general meeting of the Society during the meeting over which he shall preside.

Article 7. The Secretary shall be the executive officer of the Society under the direction of the Executive Committee. He shall keep an account of all business that he transacts for the Society, and make an annual report which shall be laid before the Society. He shall issue a circular of information to the members at least two months before each meeting, and shall in connection with the Executive and Local Committees, make all necessary arrangements for the meetings and exhibitions of the Society. He shall receive and bring before the Executive Committee the titles and abstracts of papers proposed to be read before the Society. He shall receive and hold in trust for the Society all books, pamphlets, and manuscripts belonging to the association and allow the use of the same under the direction of the Executive Committee. He shall receive all communications addressed to the Society during the interval between meetings, and properly attend to the same.

Article 8. The Treasurer shall collect all assessments and admission fees and notify members of any arrearages. He shall keep an account of all receipts and expenditures of the Society, and make an annual report of the same to the Executive Committee for publication.

Article 9. The Executive Committee shall consist of the President, Vice-President, Secretary and Treasurer, and three members elected by ballot in general session. The duties of the Executive Committee shall be to manage the financial affairs of the Society; to nominate members; to arrange the business and programmes for general session; to appoint general sessions; to nominate the general officers for the following year, and to act upon all invitations extended to the Society; to examine papers and decide which shall be read and published in the proceedings. The Executive Committee shall meet at the call of the President.

Article 10. The Local Committee shall consist of members of the Society, residing at or near the place of the proposed meeting. It is expected that the Local Committee, assisted by the officers of the Society, will make all essential arrangements for the meeting, and issue a circular giving necessary particulars at least two weeks before the meeting.

MEETINGS AND EXHIBITIONS.

Article 11. There shall be every year, at such time and place as the Executive Committee may nominate and be chosen by a majority of the members, a general meeting of the Society and an exhibition of work, for four days or longer. General sessions shall be held at 10 o'clock A. M., unless otherwise ordered, on every day of the meeting, Sundays excepted, at which time papers may be read and discussed.

Article 12. Besides the general meeting, the President and Executive Committee shall have the power to call a business meeting of the Society, once every three months if necessary, in the town or city which contains the largest number of Society officers or active members.

Article 13. *Section* 1. Every exhibition shall be competitive throughout, and will be divided into four classes, viz.: Mammals, Birds, Reptiles and Fishes. In each of these classes there shall be awarded a Certificate of Merit, showing that any one holding such certificate has made a highly

1871. Boucard, A. How to gain from eighty to two hundred pounds sterling a year by instructive and amusing means; or, instructions for collecting, preserving, and sending collections of natural history. 8vo. 28 pp. London: General Natural History Agency.

Not seen; title from Bibl. Hist. Naturel.

1871. Koch, G. Die | Stellungen der Vögel—Für präparatoren, | Ausstopfer und Freunde der Vögel | von | Gottlieb von Koch. | 1 Heft. | Mit 120 figuren auf 10 tafeln. | Heidelberg: | Carl Winter's Universitätsbuch-handlung. | 1871. 8vo., pp. 16.

Ten plates containing 120 outline figures of birds, showing characteristic positions of European and other birds. Cf. J. F. O., xx, 1872, pp. 231.

*1872. —— —— The same; part 2d, with 130 figures on 10 plates.

Not seen

1871. Harting, J. E. Skinning and preserving birds. <Hints on Shore Shooting. London, 1871. 12mo.

Not seen; title "Catalogue of the Brooklyn Library."

1873. Maynard, C. J. The | Naturalist's Guide | in Collecting and Preserving | Objects of Natural History, | with | a | complete catalogue of the birds | of Eastern Massachusetts. | By C. J. Maynard, | with Illustrations by E. L. Weeks. | Boston: | James R. Osgood & Co. | 1873. 8vo. IX, 170 pp.

10 figures, 3 on Taxidermy. Copyright 1870. *Cf. *American Naturalist*, iv, 1870, pp. 363-67. Elliott Coues.

1873. Batty, J. H. How to Stuff Birds. <*Forest and Stream*, vol. i, p. 217.

1873. Batty, J. H. Mounting birds with closed wings; some hints on the art of taxidermy. <*Forest and Stream*, vol i, p. 390.

1874. Sylvester, S. H. Taxidermist's Manual. (See 1865.) Fourth edition.

1874. Coues, E. Field Ornithology | comprising a | Manual of Instruction | for | Procuring, Preparing, and Preserving Birds, | and a | Check-list of North American Birds. | By | Dr. Elliott Coues, U. S. A. | (Monogram) | Salem: | Naturalist's Agency, | Boston: Estes & Lauriat. | New York: Dodd & Mead. | 1874, 8vo., p. 139. [Cf. *Ibis*, 1874, p. 458. A[llen,] J. A., *American Nat.*, viii, 1874, p. 418. *American Sportsman*, iv, 1874, p. 25. *Forest & Stream*, ii, 1874, p. 141 and p. 332.]

1874. Coues, E. A Useful Hint. <*The American Sportsman*, vol. iv. p. 3.

1874. Dexter, N. Instructions in practical Taxidermy and Bird skinning. <*The American Sportsman*, iii, pp. 342, 1874.

1874. Dexter, N. Skinning and stuffing heads, No 3. <*American Sportsman*, vol. iv, pp. 23, 1874.

1874. Hornaday, W. T. How to skin a bird. <*Western Farm Journal*, 1874.

1874. Hume, A. The | Indian | Ornithological Collector's | Vade Mecum: | Containing | brief practical instructions for col- | lecting, preserving, packing, and | keeping, specimens | of | birds, eggs, nests, feathers, | and | skeletons | by | Allen Hume. | Price, one rupee. | Published | by the | Calcutta Central Press Company, limited, | Calcutta, | and | Messrs. Bernard Quaritch, | London, 1874, 12mo., ii, 78 pp.

1874. Stetson, E. J. Additions to Newton Dexter's article. <*American Sportsman*, iii, pp. 396, 1874.

1874. Ward, Henry A. Directions for skinning mammals, [Beasts of all kinds,] and preparing their skins for stuffing for museums.

A circular, one sheet, 4 figures.

1874. WOOD, Rev. J. G. Home of a Naturalist. < OUT OF DOORS, pp. 290–318.

Contains a critique on Waterton's Collection and Methods of Taxidermy.

1875. BATTY, J. H. Notes on Taxidermy. < *Forest and Stream*, vol. iv, p. 181.

Criticised by "Pickel" on page 215, and this is answered by Batty on p. 247.

1875. HARDING, S. Amateur Taxidermy. < AMATEUR TRAPPER AND TRAP-MAKERS' GUIDE, by Stanley Harding. Dick & Fitzgerald, New York, Pub. 16mo.

Twelve pages on Taxidermy, with seven figures.

1876. EGER, L. Der Naturalien-Sammler. Praktische Anleitg. Zum Sammeln Präpariren, Konserviren organ. und unorgan. Naturkörper. Unter Mitwirkung bewährter, Fachmänner. Mit 2 lith. Taf. Wien: Faesy und Frick. 158 S. 8vo.

Not seen; title from Bibl. Hist. Naturel.

1876. MANTON, W. P. Taxidermy without a Teacher, | comprising | a complete manual of Instructions | for | preparing and preserving | birds and animals. | With a chapter on hunting and hygiene; | with instructions for collecting and | preserving eggs and insects, and a number of valuable receipts. | By Walter P. Manton. | Illustrated. | Price, fifty cents. | Framingham. | The J. C. Clark Printing Company. | 1876. | 16mo., pp. 41, 3 diagrams.

Cf. *Forest and Stream*, vol. 14, p. 265.

1876. MARTIN, P. L. Taxidermie | order | die Lehre vom Beobachten, Konserviren, Präpariren und | Naturalienzammeln auf Reisen, Ausstopfen und Aufstellen | der Thiere etc. | Zweite, nach den neuesten Erfahrungen vermehret und verbesserte Auflage | unter Mitwirkung | von Konservator Hodek, Professor dr. v. Koch, Custos Schmelz, u. A. | von | Philipp Leopold Martin | Nebst einem Atlas in 10 Tafeln nach Zeichnungen | von | L. Martin jun. und Friedr. Specht. | Weimar, 1876. | Bernhard Friederich Voigt.

1877. COULTAS, HARLAND. The home naturalist; or, practical instructions for collecting, arranging, and preserving all kinds of natural objects, chiefly designed to assist amateurs. London: Religious Tract Society. 16mo.

Not seen; title from Bibliotheca Hist. Nat.

1877. ANON. (Beeton's Country Books, No. 2.) Birds'-nests and Eggs | and | Bird-stuffing. | With coloured and other illustrations. | [Monogram.] | London. | Ward, Lock & Co., Warwick House, | Dorset Buildings, Salisbury Square, E. C. 12mo., 63 pp.

The Taxidermy occupies thirty pages, and is illustrated with seven figures, five of method.

1877. HALLOCK, C. Backwoods Taxidermy. < SPORTSMAN'S GAZETTEER, pp. 652–656. By Charles Hallock. Forest and Stream Pub. Co., New York.

1877. HORNADAY, W. T. Directions | for | preparing skins | for | museum specimens. 16mo., 12 pp.

Issued for private circulation by Battle Creek College, Mich., 1877. Contains also a reprint of an article by Huxley in the "New England Journal of Education."

1877. KJAERBÖLLING, N. Fuglenes Taxidermie eller Anvisning til paa den letteste og hensigtsmæssigste Maade at aftage tilberede og udstoppe Fugleskind, samt om Opbevaringen af Reder og Æg. < SKANDINAVIENS FUGLE, AF N. KJAERBÖLLING, KJÖBENHAVN, (1875,) 1877.

1877. MAYNARD, C. J. (See 1873.) Revised edition. S. E. Cassino, naturalists' agency. Mass. 12mo., ix, 204 pp.

1877. Jenks, J. W. P. Hints for preserving skins of mammals and birds. <Fourteen Weeks in Zoology, J. D. Steele. A. S. Barnes & Co., New York.

1877. Wood, S. The | British Bird-preserver; | or, | How to Skin, Stuff, and Mount Birds and Animals. | With a Chapter on their Localities, Habits, | and how to obtain them. | Also | Instructions in Moth and Butterfly-catching, setting, and preserving. | With Practical Illustrations. | By Samuel Wood, | Naturalist and Professional Bird-preserver. | New edition, with Appendix. | London. | Frederick Warne & Co., | Bedford Street, Strand. 12mo. 126 pp.

1878. Feddersen, A. Vejledning til at samle og bevare Naturgjenstande. Anden Torogede Udgave. Med i Jexten indrykte oplysende traesnit. Kjöbenhavn. Philipsen, 106, sid. 8.

Not seen; title from Bibliotheca Hist. Nat.

1878. Brown, Montague. Practical Taxidermy: | A Manual of Instructions to the Amateur | in | Collecting, Preserving, and Setting up | Natural History Specimens | of all kinds. | By | Montague Brown, | A. M. B. | London, | "The Bazaar" office, 32 Wellington Street, | 1 Strand, W. C. 12mo., 155 pp. Cf. *Nature*, vol. 18, p. 37. 1878.

Thirty-nine figures, five of method.

1878. Brown, T. (See 1851.) American revised edition from twentieth English edition. New York: J. Hanly & Co. 12mo., 111 pp.

Seventy-six figures, fourteen of method.

1878. Holder, J. B. Taxidermy. <Johnson's Universal Cyclopædia, iv, p. 741.

History of the art and directions for making skins.

1878. Maunder, S. A Syllabus | of | Practical Taxidermy; | or, | the art of preparing specimens of animals. <The Treasury of Natural History, or a popular dictionary of Zoology. By Samuel Maunder. London: Longman, Green & Co. 1878. 12mo.

Fourteen pages given to subject in the appendix.

1879. Bouvier, A. Nouveau piège pour petits Mammifères, Reptiles, Mollusques, et Insects, in Guide du Naturaliste Tèur, p. 28. (D'àprès M. E. Carrière.)

Not seen; title from "Zoologischer Anzeiger, 1879," p. 241.

1879. Capus, G. Guide | du | Naturaliste préparateur | et du | naturaliste collectionneur | pour la recherche, la chasse | la recolte, le transport l'empaillage le montage, | et la conservation | des | animaux, végétaux, minéraux, et fossils | par | G. Capus, | licencié des sciences naturelles | attaché au Muséum d'histoire naturelle | [monogram.] | Paris: | Librairie J. B. Baillière et Fils, | 19 Rue Hautefeuille, près du boulevard Saint Germain. | 1879. | Tous droits reservés. | 12mo., VIII–344 pp.

One hundred figures, eight of method.

*1879. Coues, E. To prevent Grease from injuring the Plumage of Birds. <*Amer. Nat.*, xiii, p. 456. 1879.

Covering a letter on the subject from A. H. Stevens, Clinton, Conn., who used spunk for that purpose in his Taxidermy.

1879. Kaltbrunner, D. Les collections d'Oiseaux et de mammifères. <Manuel du Voyageur, par D. Kaltbrunner. pp. 481–489.

1879. Le Roye. Traité de Taxidermie, ou l'art d'empailler, de monter les oiseaux et les mammifères; suivi de leur préparation pour l'anatomie comparée, et du calendrier de la chasse aux papillons, etc. Paris: Renaud, 1879. 8vo. 71 pp., fig.

Not seen; title from Zoologischer Anzeiger, 1879, p. 241.

1880. Batty, Joseph H. Practical Taxidermy | and | Home decoration, | together with general information for sportsmen. | By Joseph H. Batty, | Taxidermist for the Hayden expedition and other Government surveys, | and many of the leading Colleges and Museums in the United States. | Author of how to hunt and trap, &c., &c. | 125 Illustrations. | [monogram] | New York: | Orange Judd Company, | 245 Broadway. | 1880. 12mo., 203 pp.

Nearly 75 pages on Taxidermy, 125 illustrations, 11 method figures.

1880. Brown, T., (see 1851.) American revised edition. Orange Judd Pub. Co. 12mo., pp. 155.

Seventy-six figures, 14 of method.

1880. Dawson, G. A. R. Indian Taxidermy. < Nilgiri Sporting Reminiscences. Madras, 1880.

1881. Boitard, M. (See 1828.) Nouveau Manuel complet du Naturaliste Préparateur: I. P. Paris, 1881. 18mo. 340 pp., avec fig.

Not seen; title from "Zoologischer Anzeiger," 1881.

1881. Housman, H. Bird-stuffing. < The Story of our Museum, (chaps. 3 and 4,) by Rev. Henry Housman, A. C. K. London, and New York: Young & Co.

1882. Davie, O. The | Naturalist's Manual, | Containing | Descriptions of the nests and eggs | of | North American birds. | Turdidæ-Tanagridæ. | Also, | Instructions for Collecting and Preserving | Birds, Nests, Eggs, and Insects. | By Oliver Davie. | Columbus, Ohio: | The Columbus Printing Works. | 1882. 8vo., 127 pp., 18 ill., 9 on Tax. Cf. *Ornithologist and Oologist,* March 1883. *The American*, vol. 4, p. 37.

1882. Eiben, C. E. Praktische Anweisung zum Ausstopfen der Vögel für alle Freunde der Ornithologie. Quedlinburg: Ernst. IV., 64 S. 8.

1882. Eger, L., e. M. Lessona. Il raccoglitore naturalista, guida pratica per raccogliere, preparare, conservare i corpi organici ed inorganici. 2a ediz., con due tav. litografate. Torino: E. Loescher. 123 pp. 8vo.

Not seen; title from Bibliotheca Hist. Nat.

1882. H.[ornaday,] W. T. Ten commandments for the hunter naturalist. < *Ward's Nat. Sci. Bull.*, 1881, No. 1, pp. 12.

1882. Hornaday, W. T. The Cambridge Elephant. < *Ward's Nat. Sci. Bull.*, No. 2, 1882.

A brief account of shooting, skinning, preserving, transporting, and mounting a ten-foot elephant.

1882. "W. T. H."[ornaday.] How to soften dry bird skins. < *Ward's Natural Science Bull.*, No. 2, 1882, pp. 12.

1882. "W. T. H."[ornaday.] Fifteen Commandments for the Taxidermist. Applying to Mammals. < *Ward's Natural Science Bull.*, No. 2, 1882.

1882. Hornaday, W. T. On the uses of Clay as a filling material. < Second Annual Report Soc. of Am. Taxidermists, 1881–'2, pp. 31–34.

1882. Hornaday, W. T. A new and easy method of mounting fish medallions. < Second Annual Report Soc. of Am. Taxidermists, 1881–'2, pp. 38–41. Illustrated.

1882. Kingsley, J. S. The | Naturalist's Assistant, | A handbook for the collector and student, | with a bibliography of fifteen hundred works | necessary for the systematic zoologist. | By J. S. Kingsley. | Boston. | S. E. Cassino, publisher. | 1882. 8vo., pp. 228. Illustrated.

About 16 pp. given to Taxidermy.

1882. Lucas, F. A. A Critique on Museum Specimens. <Second Annual Report Soc. of Am. Taxidermists, 1881–'82, pp. 34–37.

1882. "F. A. L" [ucas.] Hints about making bird skins. < *Ward's Nat. Sci. Bull.*, No. 2, 1882.

1882. Manton, W. P. (See 1876.) Second edition, revised and enlarged. Boston: Lee & Shepard, 1882. 16mo., pp. 56.

5 diagrams, 2 of method.

1882. Ward, R. The Sportsman's Hand-book | to | Practical Collecting, | Preserving, | and | Artistic setting-up | of | Trophies and Specimens, | to which is added | a synoptical guide to the Hunting grounds of the world. | By Rowland Ward, F. Z. S. | Second edition | with numerous additional Illustrations. | London: | The Author, 166 Piccadilly. | Simpkins, Marshall & Co., Stationers' Hall Court. | 1882. 8vo., 119 pp.

43 illus., 27 of method.

1882. Webster, F. S. On the placing and winding of Bird's feathers. Illustrated. <Second Annual Report Soc. Am. Taxidermists, 1881–'82, pp. 41–46, Ill.

1883. Capus, G. (See 1879.) Guide du Naturalist Préparateur et de Voyageur Scientifique. 2d edition, entièrement refondu par le Dr. A. T. de Rocheburne, avec 223 fig. 18mo.

Not seen; title from Catalogue mensuel de La Librairie Française.

1883. Hornaday, W. T. Every Boy his own Taxidermist. < *Mastery*, vol. i, eight chapters, pp. 131, 147, 167, 185, 337, 353, 369, 387.

Illustrated with 15 method figures.

1883. —— —— [Jencks, F. T.] Instructions for making bird skins. <Southwick & Jencks' Catalogue of Bird Skins and Eggs, 1883.

1883. Lucas, F. A. How to mount a bird. By F. A. Lucas, Ex-President of the Society of American Taxidermists. <Sport with Rod and Gun, Century Co., New York.

1883. Maynard, C. J. A Manual of Taxidermy. | A Complete Guide | in collecting and preserving | Birds and Mammals, | by C. J. Maynard. | Illustrated. | Boston. | S. I. Cassino and Company. | 1883. 8vo., 111 pp. 16 ill.; 6 of method.

Cf. Science, 1883, II, pp. 313. W. T. Hornaday. And *Journal of Education*, July 5, 1883.

1883. Schmeling, C. Das ausstopfen und Konservieren der Vögel und Säugethiere. Eine Anleitung, das Ausstopfen der Vögel und Säugethiere durch Selbstunterricht zu erlernen. Mit 34 erläut eingede. Holzschn. 6 Aufl. Berlin, Mode. 94, S. 8.

Not seen; title from Bibliotheca Hist. Nat.

1883. Stradling, Dr. How to skin, stuff, and mount a bird in five minutes. < *Harper's Young People*, iv., p. 630. 1883.

1884. —— [Jencks, F. T.] Color of Birds' eyes. How to soften an Owl's foot. < *Random Notes on Natural History*. Vol. i, p. 1.

1884. —— [Jencks, F. T.] Value of Steam in Taxidermy. < *Random Notes on Nat. Hist.* Feb. 2, 1884.

1884. —— [Jencks, F. T.] The uses of poisons. < *Random Notes*, No. 4, vol. i, April, 1884.

1884. Lemaire. De la chasse et de la préparation des oiseaux. 8vo., avec. pl.

Not seen.

1884. Ward, R. The Sportsman Hand-book to Practical Collecting, Preserving, and Artistic setting up of Specimens, by Rowland Ward. <*The American Field.* Vol. xxi, pp. 329–30, 353–55, 376–77; continued.

A reprint of Mr. Ward's work, as a serial article.

1884. Hornaday, W. T. Brief directions for Removing and Preserving the Skins of Mammals, by Wm. T. Hornaday. <Appendix No. 22, Proceedings U. S. Nat. Museum, for 1883. Four method illustrations.

The report is not yet published, but a few copies of this Appendix have been distributed.

1884. Anon. Ichthy-Taxidermy. < *The American Angler*, vol. 5, pp. 71. Copied from *The Chronicle*, Raleigh, N. C.

Note.—A star (*) marks those titles supplied by the kindness of Dr. Coues. These have been verified in most cases, but I have been obliged to mark a few "not seen." A dagger (†) marks those taken from a list in Bibliotheca Zoologica by W. Engelmann, and have not been seen by me. A double dagger (‡) shows those taken from "Thesaurus Ornithologiæ," by Dr. C. G. Giebel. These, too, I have not had the pleasure of examining.

THE TAXIDERMIC COLLECTION.

In April, 1882, the Society received the following letter:

Mr. William T. Hornaday,
Secretary Society American Taxidermists:

Dear Sir: I am desirous of having formed for the National Museum a collection of objects illustrating the present condition and possibilities of the art of taxidermy. Such a collection will be useful in several ways. It will serve a useful purpose in connection with the other educational features of the Museum; it would call attention to the availabilities of taxidermy in various branches of the decorative arts, and it will stimulate competition among taxidermists, and thus encourage a higher degree of excellence in workmanship. I should be very glad to have this collection made up by the Society of American Taxidermists, which by its efforts has already done much to develop the art under its patronage.

If your Society should decide to prepare and deposit such a collection in the National Museum, I can promise that full credit shall be given to its members. As chief taxidermist of the Museum you will act as curator of this collection. I shall be glad to see it completed, so far as it may be practical, before the end of the present year.

Yours, respectfully,
(S'g'd) SPENCER F. BAIRD,
Director.

By a vote of the Society at the New York general meeting the invitation conveyed in the above letter was accepted, and a communication forwarded to the Director of the National Museum informing him of the fact.

It is not expected that this collection will entail any expenditure from the treasury of the Society, but that it will be made up of individual donations directly to the Museum. In every case the name of the donor will appear upon the printed labels attached to his gifts, and the collection as a whole will be duly credited to the Society. When completed this collection will be ranked with those which illustrate the "Graphic, Plastic, and Decorative Arts," and it is hoped that this first official recognition of taxidermy as a fine art will be fully sustained by the collection.

I am authorized to state that the National Museum will afford the members of the Society every facility in its power to enable them to prepare their contributions with as little expense as possible. If a member should desire to prepare and donate an important finished specimen or group, which would involve too great an outlay for him to meet alone, in such cases, subject to the approval of the director, the Museum will endeavor to supply certain materials in order to lessen the cost of the production. All transportation charges will be met by the Institution.

It is of course expected that each member who contributes either models or finished specimens will choose illustrations from the line of work in which he excels, in order that his contribution may represent his skill to the best advantage. It is not expected that the Society will contribute the entire collection of "tools and materials," but at the same time any gifts of either class of objects, either of common or special pattern, will be placed in the collection and properly accredited.

This collection when made will be the only one of its kind in existence, and since it will officially represent the present state of the art of taxidermy it is particularly desirable that every object should be as fine and perfect as possible. The collection will be a lasting monument to the Society, and every effort will be made on the part of the Museum to display it to the best advantage.

From the appended classification of the collection it will be seen that a large number of objects are required of many different kinds, the production of which will necessitate prompt and vigorous effort. The collection must now be completed without further delay, and members are expected to act promptly.

WILLIAM T. HORNADAY.

[From the Proceedings of the United States National Museum for 1881, vol. 4. Appendix.]

SMITHSONIAN INSTITUTION.

UNITED STATES NATIONAL MUSEUM.

No. 12.

CLASSIFICATION OF THE COLLECTION TO ILLUSTRATE THE ART OF TAXIDERMY. (58, B. 1.*)

BY WILLIAM T. HORNADAY.

Tools, Materials, and Accessories.

A. Tools used by taxidermists.
  (1) For skinning animals.
  (2) For cleaning skins.
  (3) For carving wooden skulls, bones, &c.
  (4) For drilling and boring.
  (5) In building manikins.
  (6) For inserting fibrous filling-materials.
  (7) In setting eyes and modelling generally.

B. Materials used.
  (1) Preservatives and protectives for skins.
  (2) Iron supports.
  (3) Fibrous filling-materials.
  (4) Plastic filling-materials.
  (5) Materials for repairing and restoring.
  (6) Specimens of repairing work.
  (7) Coloring-materials and appliances.
  (8) Materials for removing grease, dirt, and blood from feathers and hair.

---

* Division VIII. Intellectual Occupations of Mankind.
Class 58. The Graphic, Plastic, and Decorative Arts.
Section B. Taxidermy, and animal modelling.
Subsection 1. Taxidermy.

C. Accessories.
  (1) Glass eyes.
  (2) Artificial leaves.
  (3) Artificial ground-work: water, ice, snow, rock, and wood.
  (4) Artificial perches, trees, and pedestals.

Processes in Taxidermy.

D. Dry skins of animals not mounted.
  (1) Mammals.
  (2) Birds.
  (3) Reptiles.
  (4) Fishes.

E. Models to show the processes of relaxing dry skins.

F. Sets of models illustrating the processes of mounting.
  (1) Small mammals.
  (2) Large mammals.
  (3) Small birds.
  (4) Large birds.
  (5) Serpents.
  (6) Fishes, entire and in medallion.
  (7) Heads of mammals.

Examples of Taxidermic Workmanship.

G. Mammals, small, medium, and large.
H. Birds, small, medium, and large.
I. Reptiles, small, medium, and large.
J. Fishes, small, medium, and large.
K. Artistic groups of the above, in variety.
L. Grotesque groups, in variety.
M. Animals grotesquely mounted.

N. Ornamental or decorative taxidermy.
  (1) Heads on shields and in cases.
  (2) Screens (with head and neck of bird, or entire subject.)

(3) Medallions, large and small.
(4) Panel-pieces on shields and in cases.
(5) Rugs, with head mounted.
(6) Hat-birds and birds' heads.
(7) Other ornamental or decorative work.

o. Photographs of first-class work of all kinds, by representative taxidermists.

PARTIAL LIST OF CONTRIBUTIONS

To the Taxidermic Collection of the United States National Museum.

Numbers in brackets are those borne by the pieces at the New York Exhibition of 1883.

SEE PLATE.

No. 1. [15.] "Coming to the Point" ....by Wm. T. Hornaday.
Recommended for Special Medal at Third Exhibition.

2. [61.] "An Interrupted Dinner" ......by Frederic A. Lucas.
Diploma of Honor at First Exhibition.

3. [257.] Head of Caribou....................by Wm. J. Critchley.
Presented by Prof. HENRY A. WARD.

4. [405.] Peacock Screen.....................by Thos. W. Fraine.

5. [381.] Wounded Heron..................by Frederic S. Webster.
Second Specialty Medal at Third Exhibition.

6. [450.] Dead Gull.......................... by Elwin A. Capen.

7. Great Horned Owl.................by John Wallace.
Recommended for Special Medal.

8. [127.] Bald Eagle ....by John Wallace.

9. [84.] Fox Squirrel.......................by P. W. Aldrich.

10. [38.] Humming Birds....................by Mr. and Mrs. G. H. Hedley.

11. [13.] "Nutcrackers"—Squirrels .....by Joseph Palmer.

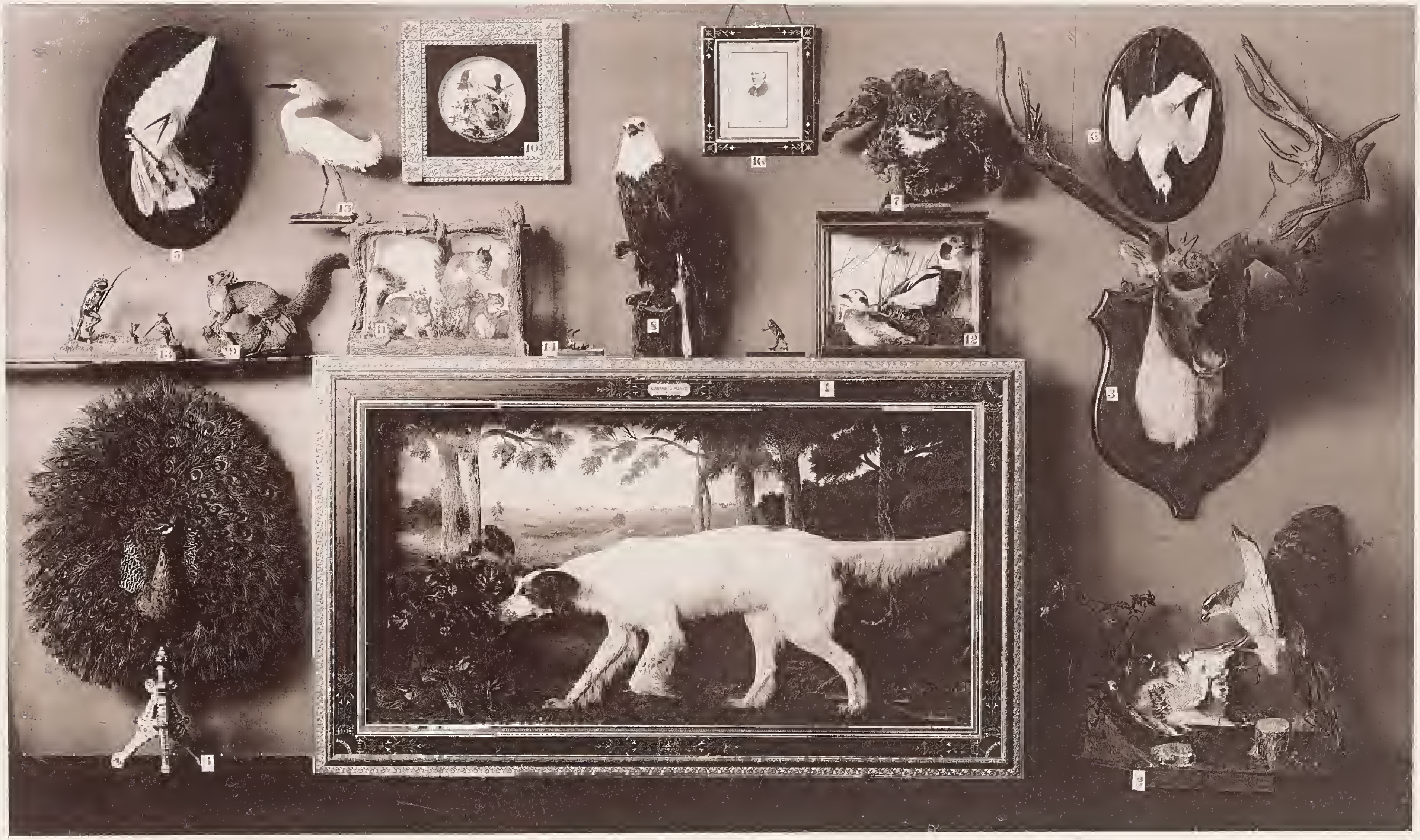
12. [53.] South-southerly Ducks.......... by Wm. Palmer.

13. [318.] "Sold Again" ....by J. F. D. Bailly.

14. [315, 291.] Frogs, Toads........................ " " "

15. [143.] Snowy Egret................. ......by Thomas Rowland.

16. Portrait of Jules Verreaux.......presented by J. F. D. Bailly.



Contributions to the Taxidermic Collection from the New York Exhibition of 1883.

LIST OF HONORS, REGULAR AND SPECIAL, TO BE AWARDED AT THE FOURTH ANNUAL EXHIBITION.

REGULAR PRIZES.

Provided for Annually by the Constitution.

For the best piece in entire exhibition,	Specialty Medal, (Silver.)
For the second best piece in the entire exhibition,	Second Specialty Medal, (Bronze.)
For the best general exhibit according to Article 13, Section 3, of the Constitution,	General Average Medal, (Silver.)
To each exhibit in Class A, Taxidermy Proper, as per exhibition catalogue, which shall stand at 85 per cent. or over,	Diploma of Honor.
To each exhibit in Class A which shall stand at 75 and under 85 per cent.,	Certificate of Merit.

SPECIAL PRIZES.

List adopted by the Society.

For the best Mammal in the entire exhibition, provided it shall not have already received the Silver Specialty Medal,	Bronze Medal.
For the best Bird in the entire exhibition, provided it shall not have already received the Silver Specialty Medal,	Bronze Medal.
For the best exhibit of Mammals,	Bronze Medal.
For the best exhibit of Birds,	Bronze Medal.
For the best exhibit of Reptiles,	Bronze Medal.
For the best exhibit of Fishes,	Bronze Medal.
For the best exhibit of Heads,	Silver Medal.
For the best display of articles of ornament and use,	Silver Medal.
For the handsomest article of ornament or use,	Diploma.
For the second handsomest of the same,	Certificate.
For the best exhibit of grotesque groups and animals grotesquely mounted,	Bronze Medal.
For grotesque groups, &c., Diplomas and Certificates will be awarded at the discretion of the Judges.	
For the best exhibit of Accessories to Taxidermy in each section,	Diploma of Honor.
For the second best in the same,	Certificate of Merit.

It is to be understood that the Judges have the power to withhold any one of the above Special Prizes if it shall ever occur that the exhibit ranking "best" or "second best" shall be deemed unworthy of an award.

By order of the Executive Committee:

FREDERIC A. LUCAS, *Sec'y.*

LIST OF POINTS AND VALUES

For the Judgment of Specimens at the Exhibitions of the Society of American Taxidermists.

Groups of Mammals.

General difficulty of subject	15
Attitude	15
General artistic effect	15
Size of specimens	10
Neatness of finish	10
Form	10
Expression	10
Smoothness	5
Naturalness of colored parts	5
Quality of natural surroundings	5
Perfection	100

Groups of Birds.

General difficulty	15
Attitude	15
General artistic effect	15
Size of specimens	15
Natural surroundings and effects	15
Form	10
Smoothness	5
Naturalness of colored parts	5
Neatness of finish	5
Perfection	100

Groups of Reptiles and Fishes.

Smoothness	15
Naturalness of size	10
“ of form	15
“ of color	15
Attitude	10
Size and difficulty	15
General neatness	5
General artistic effect	10
Quality of accessories	5
Perfection	100

Single Fishes.

Form	20
Naturalness of size	20
“ of colors	15
Smoothness	20
Style of mounting	15
Expression	5
Mouth-parts	5
Perfection	100

Single Mammal Specimens.

General difficulty of subject	15
Attitude	15
Form and proportions	15
Size of specimens	15
Development of muscles	10
Expression	10
General neatness of finish	10
Smoothness	5
Naturalness of colored parts	5
Perfection	100

Single Bird Specimens.

Attitude	15
Centre of gravity	15
Form	15
Naturalness of size	10
Smoothness	10
Angle of legs	10
Adjustment of wings	10
Neatness of finish	10
Naturalness of colored parts	5
Perfection	100

Single Reptiles.

Smoothness	15
Naturalness of size	15
“ of form	15
“ of colors	15
Attitude	10
Size	10
General difficulty	10
“ neatness	10
Perfection	100

Bird Skins, (in collections.)

Naturalness of size	15
Cleanliness	15
Shape of head	15
Position of wings	15
Shape of neck	10
Position of legs	10
General form	10
Smoothness	10
Perfection	100

Heads.

Size and difficulty	15
Form	15
Expression	15
Smoothness	15
Mouth	10
Ears	5
Naturalness of colored parts	10
Style of mounting	10
General neatness	5
Perfection	100

INDEX.

Page.
Accessories to Taxidermy 119
Active Members † 3, 4
Address of Dr. J. B. Holder 34, 39–51
    President 51–58
Adjuncts to Taxidermy 25, 119
Admission Fee †
Advertising 37, 38
Amendments to Constitution †
Animal Sculptures 25
Artificial Leaves 25
Awards 28, 29, 30, 119
Assessment, Annual †
Baird, Prof. S. F 35. 112
Batrachians 15
Bibliography of Taxidermy 93
Birds 9–14, 120
Bird Skins 6, 17, 26, 120
    How to clean 77
    How to make 82
Board of Patrons 5
Carnegie, Mr. A 33, 35
Casts from Dead Animals 26, 27
Catalogue of Third Exhibition 5, 27
Certificate of Merit † 119
Clay in Mounting Turtles 87, 88
Constitution. See Appendix.
Corresponding Members 2
Crustaceans, On the Mounting of 74
Diploma of Honor † 28, 29, 30, 119
Drawings 25
Dues, Annual †
Executive Committee † 1
Exhibition 33–36
    Catalogue of 5–27
    Entries at 27
Expenditures 37
Eyes, Glass 25
Fish 16, 120
    Casts of 26, 27

Page.
Glass Eyes 25
Grease, To Remove 77
Grotesque Groups, etc 18–20
Groups 9-11, 120
Heads 6, 16, 120
    Casts of 26, 27
Honorary Exhibits 25–27, 32
Honorary Members 2
Jenks, Prof. J. W. P 35
Judges 5
    Report 28–30
    Selection of †
Kemeys, Sculptures of 25
Leaves, Artificial 25
Mammals 5, 9–11, 12, 67-71, 120
Medals, Awards of † 28, 29
    Recommended 29
Members, Active 3, 4
    Corresponding 2
    Honorary 2
Meetings †
"Mungo," Photograph of Frontisp.
Museum Specimens 11, 26, 49
Novelties in Taxidermy 18
Officers † 1
Opening Reception 34
Ornamental Work 20–23
Photographs of Members 27
    Work 27
Plaster Casts 26, 27
    In Cleaning Birds 79
Points and Values 120
Press 36
Prizes Awarded at New York 28–30
    To be Awarded 119
    Rules for Awarding 5
Quadrupeds, Faults in the Mounting of 67
Receipts 37

---

† All topics marked with a dagger will be found in the Constitution, which forms the Appendix.

Page.
Reception.................................. 34
Report, Annual .... †
  Judge's 28–30
  Secretary's......... 31–36
  Treasurer's...... ....37, 38
Reptiles.......................11, 15, 16, 120
  Casts of 26
Resolutions 35
Rock Work....................... 25
Rules and Regulations............... 6
Sales at Exhibition.................... 37
  Rules Regarding.... .... 6, 8
Secretary .... † 1
Skeletons Exhibited..................27, 32
Society, Constitution of......Appendix.
  Members of 1–4
  Purposes of.............. † 7
Special Prizes 119
Specialty Medals.................† 28, 119

Page.
Taxidermy, Accessories to........... 119
  Adjuncts to..... 25
  Bibliography of.....93–112
  As a Decorative Art... 59
  Scope and Needs of... 51
Taxidermic Collection................ 112
  Classification of..... 115–117
  Contributions to............... 118
  Object of 112, 113
Taxidermist, Struggles of an Amateur.................................... 90
Taxidermist's Sanctum............... 8
Treasurer .... † 1
  Report of..................37, 38
Turtles 11, 15, 16
  How to Mount................ 84
  " Kill................... 85
Ward, Prof. Henry A.................... 36

---

† All topics marked with a dagger will be found in the Constitution, which forms the Appendix.

creditable exhibit of mounted specimens in that section. The Certificate of Merit shall be equivalent to a second class prize, but when two or more exhibits are of equal merit, then each one shall be awarded a certificate.

Section 2. In each class there shall also be awarded a DIPLOMA OF HONOR, showing that any one holding such diploma has made a first class exhibit in that class.

The Diploma of Honor shall be equivalent to a first prize, but more than one may be awarded in each class under the same conditions as the certificate.

Section 3. There shall be a SILVER MEDAL awarded to any member of the Society who shall win a Diploma of Honor in each of the four different classes, whether at one exhibition or at many, or to any member who shall at any one exhibition make a first class exhibit of specimens in each of the four classes—Mammals, Birds, Reptiles and Fishes. This shall be known as the MEDAL FOR GENERAL AVERAGE.

Section 4. There shall be a SILVER MEDAL awarded at each exhibition for the best special piece of work which shall reveal the most artistic design, the most perfect execution and the greatest amount of surmounted difficulty. In case there should be in any one exhibition two or more pieces of work, differing in character but of equal excellence, then more than one silver medal may be awarded at a single exhibition. Such medal shall be known as the SPECIALTY MEDAL.

Section 5. There shall be awarded at each annual exhibition, for the second best piece of work, in whichever of the four classes such work may appear, a BRONZE MEDAL. This medal shall be known as the SECOND SPECIALTY MEDAL.

Section 6. The Executive Committee shall present to the Society, six months before each annual exhibition, a schedule of awards embracing those already detailed in this article (13), and such additional special classes to be awarded medals, diplomas or certificates, as the committee deem expedient. On the approval of a majority of the Society this schedule shall form the basis of award at the ensuing annual exhibition, and each member of the Society shall at once be furnished with such approved schedule on which awards are to be made.

Section 7. A committee of three, to be called the Inspection Committee, shall be appointed by the Executive Committee, at such time as shall be deemed proper, before each annual exhibition. This committee shall have the power to report to the Executive Committee on the condition of the exhibits entered. Exhibitors shall send their names and addresses to the chairman of the committee, together with a list of the objects they intend to enter.

Section 8. The judges who shall award prizes must be furnished by the Secretary with a printed copy of Article 13, and the accepted schedule of the Executive Committee.

ARTICLE 14. *Section* 1. No piece having taken a prize shall be entered for competition a second time, but such piece may be placed on exhibition as often as its proprietor desires.

Section 2. No member shall ever exhibit any specimens other than those mounted by his own hands, under penalty of expulsion from the Society and forfeiture of all honors previously won. Upon entering specimens for any exhibition, every exhibitor shall sign a written declaration that said specimens have been mounted by his own hands, and without skilled assistance of any kind from any other taxidermist.

JUDGES.

Article 15. For each exhibition there shall be elected by the Society three competent judges, who are not active members, who shall critically examine each specimen, group, or collection which is entered in competition in the exhibition, and award it the honor to which it is justly entitled. The decisions and awards of the judges shall be final.

PAPERS AND COMMUNICATIONS.

Article 16. All members must forward to the Secretary as early as possible before the convening of the Society, full titles of the papers they propose to present during the meeting, with a statement of the time that each will occupy in delivery, and also such abstracts of their contents as will give a general idea of their nature.

PRINTED REPORT.

Article 17. The Secretary shall have a full report of each general meeting and exhibition printed in an octavo volume as soon after the meeting as possible. Authors must prepare their papers ready for press within one month after adjournment, otherwise only the abstracts will appear in the printed volumes. Illustrations must be provided for by the authors of the papers, or by a special appropriation from the Executive Committee. Whenever a silver medal is awarded for a special piece of work, whether a single specimen or a group, said piece of work shall be photographed at the expense of the Society, and a copy of the same inserted as a frontispiece to the volume of the report for that meeting and exhibition. Immediately on publication of the volume, a copy shall be forwarded to every member of the Society who shall not be in arrears upon the Treasurer's books, and it shall also be offered for sale by the Secretary. The Executive Committee shall designate the institutions to which copies shall be distributed.

ADMISSION FEE AND ASSESSMENT.

Article 18. The admission fee for active members shall be three dollars. The annual assessment for active members shall be two dollars, payable within one year under penalty of expulsion from the Society.

All fees and assessments must be paid to the Treasurer who shall give proper receipts for the same.

Article 19. The accounts of the Treasurer shall be audited annually by two auditors appointed by the President.

AMENDMENTS OF THE CONSTITUTION.

Article 20. No part of this Constitution shall be amended or annulled without the concurrence of three-fourths of the members, either present in general session, or voting by postal card to the Secretary.

Amendment I. Article 18. Annual dues of members elected during the first six months of any year to be reckoned from the 1st of July succeeding such election. Dues of members elected during the last six months of any year to be computed from the 1st of January following.

This amendment to take effect at once, and apply to all now members of the Society, as well as to all hereafter elected.

SMITHSONIAN INSTITUTION LIBRARIES
3 9088 01316 8364